No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
1	Kennedy Space Center (KSC)	Government of Spain	Spain (SP)	Agreement on Space Cooperation Between the United States of America and the Kingdom of Spain	Umbrella/Framework Agreement (UM/FW)	Authorization for, in case of an emergency, manned space vehicles of the United States to overfly, enter, and depart Spanish air space and use the runways, taxiways, and other installations at the Moron de la Frontera, Rota, and Zaragoza bases; also, agreement to negotiate agreements in promising areas for joint efforts to strengthen cooperation in space science and technology. Dip notes entering the agreement into force were exchange on Sept 3, 1991, and May 12, 1994. The science and technology portion of this agreement was implemented by agreement SP0027 of 12/02/1991 with INTA and agreement SP0028 of 07/03/1992 with CDTI.	11-Jul-91	31-Dec-00
2	All NASA Centers	National Institute for Aerospace Technology (INTA)	Spain (SP)	Agreement on Cooperative Activities Between NASA and the National Institute For Aerospace Technology of Spain	Umbrella/Framework Agreement (UM/FW)	Broad agreement between NASA and the National Institute for Aerospace Technology of Spain (INTA) to consider cooperation in a variety of fields in Space Science, Earth Science, Aeronautics Research, and Exploration Systems. The agreement also establishes a group to discuss potential cooperative projects in the identified areas. The agreement is automatically extended each year. The expiration date of 2100 was picked because it was far in the future.	2-Dec-91	31-Dec-00
3	All NASA Centers	Center for Technological Industrial Development (CDTI)	Spain (SP)	Agreement on Cooperative Activities Between NASA and the Center for Technological Industrial Development of Spain	Umbrella/Framework Agreement (UM/FW)	Umbrella/Framework Agreement (UM/FW): NASA Center: Mentioned different NASA Installations. Broad agreement between NASA and the Center for Technological Industrial Development of Spain (CDTI) that anticipates the negotiation of future agreements between NASA and Spanish agencies in a variety of fields in Space Operations, Space Science, Earth Science, Aeronautics Research, and Exploration Systems. The agreement specifically mentions space vehicle landing facilities and science and technology development programs. It also calls to the establishment of a group to discuss potential cooperative projects. The agreement is automatically extended each year. The expiration date of 2100 was picked because it was far in the future. The CDTI is known presently (August 2008) as the Centre for the Development of Industrial Technology (CDTI).	3-Jul-92	31-Dec-00
4	Goddard Space Flight Center (GSFC)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Terra/Earth Observing System (EOS AM-1): Multi-Angle Imaging Spectro-Radiometer (MISR)	Project-Specific Agreement (PSA)	Participation by Dr. Jan-Peter Muller on the Multi-Angle Imaging Spectro-Radiometer (MISR) Instrument Team, which is to design, develop, and verify the MISR instrument and MISR data exploitation. Missing UK letter.	11-Sep-92	31-Dec-20
5	Goddard Space Flight Center (GSFC)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Aqua/Terra/Earth Observing System (EOS AM-1 and PM-1): Moderate Resolution Imaging Spectrometer (MODIS)	Project-Specific Agreement (PSA)	Participation by Dr. Jan-Peter Muller of University College-London in the Instrument Team for MODIS, a facility instrument designed to measure both biological and physical processes on a global basis. Missing the UK letter.	11-Sep-92	31-Dec-20
6	Jet Propulsion Laboratory (JPL)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Aqua/Earth Observing System (EOS PM-1): AIRS/AMSU/MHS	Project-Specific Agreement (PSA)	Participation by Dr. Rolando Rizzi of the European Centre for Medium Range Weather Forecasting on the Instrument Team for the Atmospheric Infrared Sounder/Advanced Microwave Sounding Unit-A/Microwave Humidity Sounder(AIRS/AMSU/MHS), a facility instrument of NASA's EOS. No UK letter.	11-Sep-92	31-Dec-20
7	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Instrument Team for Atmospheric Infrared Sounder (AIRS)/Advanced Microwave Sounding Unit-A (AMSU)/Microwave Humidity Sounder (MHS) Instruments of Earth Observing System (EOS PM-1)/Aqua	Project-Specific Agreement (PSA)	Service by Dr. Alain Chedin of Ecole Polytechnique on the Instrument Team for the Atmospheric Infrared Sounder (AIRS), Advanced Microwave Sounding Unit-A (AMSU), and Microwave Humidity Sounder (MHS) instruments of the EOS.	16-Feb-93	31-Dec-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
8	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Instrument Team for CERES Instrument of Earth Observing System (EOS AM-1 and PM-1)/Aqua/Terra	Project-Specific Agreement (PSA)	Service by Dr. Robert S. Kandel of Ecole Polytechnique on the Instrument Team for the Clouds and Earth's Radiant Energy System (CERES) instrument of the EOS.	16-Feb-93	31-Dec-20
9	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Instrument Team for MODIS Instrument of Earth Observing System (EOS AM-1 and PM-1)/Aqua/Terra	Project-Specific Agreement (PSA)	Service by Dr. Didier Tanre of the Laboratoire d'Optique Atmospherique on the Instrument Team for the Moderate-Resolution Imaging Spectrometer (MODIS) instrument of the EOS.	16-Feb-93	31-Dec-20
10	Goddard Space Flight Center (GSFC)	Russian Federal Space Agency (Roskosmos)	Russia (UR)	WIND Mission/Cooperation in the Konus-WIND Experiment	Project-Specific Agreement (PSA)	Flight on the U.S. WIND mission of the Russian Konus gamma-ray burst detector to enhance the scientific return to the international science community in the area of gamma-ray astronomy.	28-Oct-94	31-Dec-23
11	Goddard Space Flight Center (GSFC)	Canadian Space Agency (CSA)	Canada (CA)	Flight of the Measurements of Pollution in the Troposphere (MOPITT) Instrument on Earth Observing System (EOS AM)/Terra	Project-Specific Agreement (PSA)	This MOU establishes the scientific and technical cooperation for the flight of the MOPITT instrument on the NASA EOS-AM1 polar orbiting platform of MOPITT to further cooperation in global change research by enabling the multidisciplinary study and long-term systematic monitoring of Earth, including research involving data from all Earth observing platforms in the International Earth Observing System.	15-Nov-94	31-Dec-25
12	Headquarters (HQ)	Russian Federal Space Agency (Roskosmos)	Russia (UR)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	16-Dec-94	31-Dec-00
13	Headquarters (HQ)	Ministry of Education and the Department of Environmental Protection	Moldova (MD)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	30-Jan-95	31-Dec-00
14	Headquarters (HQ)	Government of the Kingdom of the Netherlands	Netherlands, The (NL)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	28-Feb-95	31-Dec-00
15	Headquarters (HQ)	Government of the Republic of Senegal	Senegal (SG)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	17-Mar-95	31-Dec-00
16	Headquarters (HQ)	Ministry of Education	Egypt (EG)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	20-Mar-95	31-Dec-00
17	Headquarters (HQ)	National Board of Education	Finland (FI)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	23-Mar-95	31-Dec-00
18	Headquarters (HQ)	Ministry of Education	Belgium (BE)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	24-Mar-95	31-Dec-00
19	Headquarters (HQ)	Ministry of the Environment	Israel (IS)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	24-Mar-95	31-Dec-00
20	Headquarters (HQ)	Ministry of Ecology and Biological Resources	Kazakhstan (KZ)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	27-Mar-95	31-Dec-00
21	Headquarters (HQ)	Government of the Kingdom of Norway	Norway (NO)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	Mission: Education. The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	5-Apr-95	31-Dec-00

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
22	Headquarters (HQ)	Ministry of Education and Sport	Croatia (HR)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12-Apr-95	31-Dec-00
23	Headquarters (HQ)	Federal Ministry of Education	Austria (AU)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	20-Apr-95	31-Dec-00
24	Headquarters (HQ)	Ministry of Education, Youth, and Sport	Czech Republic (CZ)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	20-Apr-95	31-Dec-00
25	Headquarters (HQ)	Ministry of Education	Korea, Republic of (KS)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	21-Apr-95	31-Dec-00
26	Headquarters (HQ)	Ministry of Housing, Land Use Planning, and the Environment	Uruguay (UY)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	21-Apr-95	31-Dec-00
27	Headquarters (HQ)	Ministry of Sustainable Development and Planning (MDSP)	Bolivia (BL)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	22-Apr-95	31-Dec-00
28	Headquarters (HQ)	Government of Japan	Japan (JA)	Cross-Waiver of Liability for Cooperation in Peaceful Exploration and Use of Outer Space	Umbrella/Framework Agreement (UM/FW)	Agreement establishing a cross-waiver of liability for cooperation in the exploration and use of space for peaceful purposes to go into force on the date on which the governments of the United States and Japan exchange notes informing each other that their respective legal procedures necessary for entry into force have been completed. That exchange of notes is agreement JA-0292 of 07/20/1995. See, also, agreement JA-0290 of 10/25/1994. All merged here now, others deleted. Note that this cross waiver does not apply to ISS Cooperation.	24-Apr-95	31-Dec-00
29	Headquarters (HQ)	Ministry of National Education	Benin (BN)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	28-Apr-95	31-Dec-00
30	Headquarters (HQ)	Ministry of National Education	Turkey (TU)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	5-May-95	31-Dec-00
31	Headquarters (HQ)	Ministry of Education	Romania (RO)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	22-May-95	31-Dec-00
32	Headquarters (HQ)	Ministry of Education	Kyrgyzstan (KG)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	9-Jun-95	31-Dec-00
33	Headquarters (HQ)	Department of Education	Ireland (EI)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12-Jun-95	31-Dec-00
34	Headquarters (HQ)	Ministry of Culture and Education	Argentina (AR)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	28-Jun-95	31-Dec-00

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
35	Headquarters (HQ)	Ministry of Environment of Tunisia	Tunisia (TS)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	27-Jul-95	31-Dec-00
36	Headquarters (HQ)	National Agency for Education	Sweden (SW)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	23-Aug-95	31-Dec-00
37	Headquarters (HQ)	Ministry of Planning and Cooperation	Chad (CD)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	27-Sep-95	31-Dec-00
38	Headquarters (HQ)	Ministry of Education	El Salvador (ES)	Global Learning and Observations to benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	11-Dec-95	31-Dec-00
39	Headquarters (HQ)	Ministry of National Education and Religious Affairs	Greece (GR)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12-Dec-95	31-Dec-00
40	Headquarters (HQ)	Ministry of National Education	Morocco (MO)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	27-Mar-96	31-Dec-00
41	Headquarters (HQ)	Ministry of the Environment and Energy	Costa Rica (CS)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	22-Apr-96	31-Dec-00
42	Headquarters (HQ)	Education Ministry	Ecuador (EC)	Global Learning and Observations to benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	22-Apr-96	31-Dec-00
43	Headquarters (HQ)	Department of the Environment	United Kingdom (UK)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	1-May-96	31-Dec-00
44	Headquarters (HQ)	Ministry of Education	Estonia (EN)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	19-Jun-96	31-Dec-00
45	Headquarters (HQ)	National Environmental Agency	Gambia, The (GA)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12-Jul-96	31-Dec-00
46	Headquarters (HQ)	Ministry of Education	Trinidad & Tobago (TD)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	16-Jul-96	31-Dec-00
47	Headquarters (HQ)	Ministry of National Education and Professional Training	Luxembourg (LU)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	10-Oct-96	31-Dec-00
48	Headquarters (HQ)	Republic of Marshall Islands Government	Marshall Islands (RM)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	17-Oct-96	31-Dec-00
49	Headquarters (HQ)	Ministry of Environment	Jordan (JO)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	31-Oct-96	31-Dec-00

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
50	Headquarters (HQ)	Ministry of Environment, Natural Resources, and Fisheries	Mexico (MX)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	15-Nov-96	31-Dec-00
51	Headquarters (HQ)	Ministry of Education	Italy (IT)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	21-Jan-97	31-Dec-00
52	Headquarters (HQ)	Ministry of Education	Fiji (FJ)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	28-Jan-97	31-Dec-00
53	Headquarters (HQ)	Ministry of Education	Palau (PS)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	30-Jan-97	31-Dec-00
54	Headquarters (HQ)	Government of South Africa	South Africa (SF)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	17-Feb-97	31-Dec-00
55	Headquarters (HQ)	Ministry of Education and Economic Development of Bermuda	Tanzania (TZ)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	1-Apr-97	31-Dec-00
56	Headquarters (HQ)	Ministry of Education	Poland (PL)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	2-Apr-97	31-Dec-00
57	Headquarters (HQ)	Government of Canada	Canada (CA)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	7-Apr-97	31-Dec-00
58	Headquarters (HQ)	Government of Mongolia	Mongolia (MG)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6-May-97	31-Dec-00
59	Headquarters (HQ)	Ministry of Education	Denmark (DA)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	29-May-97	31-Dec-00
60	Headquarters (HQ)	Ministry of Science and Culture	Iceland (IC)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	30-May-97	31-Dec-00
61	Headquarters (HQ)	Ministry of Education	Kenya (KE)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	9-Jun-97	31-Dec-00
62	Headquarters (HQ)	Ministry of Secondary and Primary Education	Madagascar (MA)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	11-Jun-97	31-Dec-00
63	Headquarters (HQ)	Ministry of Education	Dominican Republic (DR)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	20-Jun-97	1-Jan-00
64	Headquarters (HQ)	National Environmental Council	Peru (PE)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	18-Jul-97	31-Dec-00

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
65	Headquarters (HQ)	Ministry of Education	Portugal (PO)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	15-Sep-97	31-Dec-00
66	Headquarters (HQ)	Ministry of Basic Education and Culture	Namibia (WA)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	8-Oct-97	31-Dec-00
67	Johnson Space Center (JSC)	Italian Space Agency (ASI)	Italy (IT)	Memorandum of Understanding (MOU) Between NASA and the Italian Space Agency (ASI) for the Design, Development, Operation and Utilization of Three Mini-Pressurized Logistics Modules for the International Space Station (ISS)	Project-Specific Agreement (PSA)	This Memorandum of Understanding (MOU) agreement supersedes agreement IT-0120 of 12/06/1991, substituting three Mini Pressurized Logistics Modules (MPLMs) as the components to be furnished by Italy for the two MPLMs and a Mini Laboratory called for in IT-0120. In exchange, NASA will launch the MPLMs on the Shuttle and provide ASI .85 per cent of pressurized user accommodations; .85 per cent of accommodations for external payloads, and .85 per cent of utilization resources, and launch ASI's utilization on the Shuttle. NASA will also provide ASI one ASI-provided ISS crew member for one on-orbit increment every five years, with a minimum of 3 crew opportunities. The effective duration of the agreement is through the end of the ISS Program; i.e., December 31, 2020. Dip Notes required to enter into force. Date of dip notes unknown.	9-Oct-97	31-Dec-20
68	Headquarters (HQ)	National Department of Education	Micronesia (FM)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	7-Nov-97	31-Dec-00
69	Headquarters (HQ)	Ministry of National Education and Professional Training	Honduras (HO)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	13-Nov-97	31-Dec-00
70	Headquarters (HQ)	Ministry of Environment, Local Government, and Rural Development	Pakistan (PK)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	18-Nov-97	31-Dec-00
71	Headquarters (HQ)	Government of the Republic of Mali	Mali (ML)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	19-Nov-97	31-Dec-00
72	Headquarters (HQ)	National Central School of Agriculture	Guatemala (GT)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	5-Dec-97	31-Dec-00
73	Headquarters (HQ)	Ministry of Education and Popular Development	Suriname (NS)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	23-Dec-97	31-Dec-00
74	Johnson Space Center (JSC)	Canadian Space Agency (CSA)	Canada (CA)	Memorandum of Understanding (MOU) Between NASA and the Canadian Space Agency (CSA) Concerning Cooperation on the Civil International Space Station (ISS)	Implementing Arrangement/Agreement (IA)	Specific objectives of this MOU are: to provide the basis for cooperation between NASA and CSA in the detailed design, development, operation and utilization of the permanently inhabited civil international Space Station for peaceful purposes, in accordance with international law. Exchange of Dip Notes Required for entry into force. Dip Notes not available.	29-Jan-98	31-Dec-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
75	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	Memorandum of Understanding (MOU) Between NASA and the European Space Agency (ESA) Concerning Cooperation on the Civil International Space Station (ISS)	Implementing Arrangement/Agreement (IA)	The specific objectives of the MOU are: to provide the basis for cooperation between NASA and ESA in the detailed design, development, operation, and utilization of the permanently inhabited civil ISS for peaceful purposes, in accordance with international law; to provide a basis for cooperation that maximizes the total capability of the Space Station to accommodate user needs and that ensures that the Space Station is operated in a manner that is safe, efficient, and effective for both Space Station users and Space Station operators. An exchange of letters from ESA to NASA, dated Nov. 27, 2007, with NASA's response to ESA, dated Nov. 27, 2007, entered the MOU into force.	29-Jan-98	31-Dec-20
76	Johnson Space Center (JSC)	Russian Federal Space Agency (Roskosmos)	Russia (UR)	Memorandum of Understanding (MOU) Between NASA and the Russian Space Agency Concerning Cooperation on the Civil International Space Station	Implementing Arrangement/Agreement (IA)	The specific objectives of this Memorandum of Understanding (MOU) are: to provide the basis for cooperation between NASA and RSA in the detailed design, development, operation and utilization of the permanently inhabited civil international Space Station for peaceful purposes, in accordance with international law; to provide a basis for cooperation that maximizes the total capability of the Space Station to accommodate user needs and that ensures that the Space Station is operated in a manner that is safe, efficient and effective for both Space Station users and Space Station operators. Requires Exchange of Diplomatic Notes to enter into force. Implementing Arrangement under the IGA for ISS. Russia sent dip note for this Agreement to enter into force dated March 27, 1998. Russian Dip Note is attached. U.S. Dip Note responding to Russian Dip Note is NOT attached.	29-Jan-98	31-Dec-20
77	Johnson Space Center (JSC)	Canadian Space Agency (CSA),Japan Aerospace Exploration Agency (JAXA),European Space Agency (ESA),Russian Federal Space Agency (Roskosmos)	Multiple Signatories	Umbrella/Framework Agreement Among the Government of Canada, Governments of Member States of the European Space Agency (ESA), the Government of Japan, the Government of the Russian Federation, and the Government of the United States of America Concerning Cooperation on the Civil International Space Station	Umbrella/Framework Agreement (UM/FW)	Umbrella/Framework Agreement: Superseded the Intergovernmental Agreement, dated September 29, 1988, (MULT-0001-0). Agreement Among the member countries of European Space Agency (ESA), Canada, Japan, and Russia. The Space Station elements to be provided by each Partner are detailed in the Annex. Cooperation between NASA and each individual Partner will be specified in Memorandum of Understanding's (MOU's), pursuant to this Agreement, and cooperation between NASA and each individual Partner will be specified in Implementing Arrangements pursuant to the MOUs.	29-Jan-98	31-Dec-24

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
78	Johnson Space Center (JSC)	Japan Aerospace Exploration Agency (JAXA),Ministry for Education, Culture, Sports, Science & Technology (MEXT)	Japan (JA)	Memorandum of Understanding (MOU) Between NASA and the Government of Japan Concerning Cooperation on the Civil International Space Station (ISS)	Implementing Arrangement/Agreement (IA)	This Memorandum of Understanding (MOU) is between NASA and Japan but the designated implementing agencies are NASA and the Science and Technology Agency of Japan (STA), pursuant to the IGA for the ISS of Jan. 29, 1998. The specific objectives of this MOU are: to provide the basis for cooperation between NASA and the GOJ in the detailed design, development, operation and utilization of the permanently inhabited civil International Space Station (ISS) for peaceful purposes, in accordance with international law; to provide a basis for cooperation that maximizes the total capability of the Space Station to accommodate user needs and that ensures that the Space Station is operated in a manner that is safe, efficient and effective for both Space Station users and Space Station operators. Diplomatic Notes, dated June 8, 2001, entered the MOU into effect and are attached to the PDF. The Signature Date is used for Entry into Force date due to time lag between Signature and Entry into Force Date.	24-Feb-98	31-Dec-20
79	Headquarters (HQ)	Ministry of Education	Ghana (GH)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	20-Mar-98	31-Dec-00
80	Headquarters (HQ)	Ministry of Education	Chile (CI)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	16-Apr-98	31-Dec-00
81	Headquarters (HQ)	Federal Department for Environment, Transport, Energy, and Communication	Switzerland (SZ)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	22-Apr-98	31-Dec-00
82	Headquarters (HQ)	Government of Spain	Spain (SP)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	5-May-98	31-Dec-00
83	Headquarters (HQ)	Ministry of Pre-University Education	Guinea (GV)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	14-May-98	31-Dec-00
84	Headquarters (HQ)	Ministry of Foreign Affairs	Macedonia (MK)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists, together to study the global environment.	24-Aug-98	31-Dec-00
85	Headquarters (HQ)	Ministry of Education and Science	Bulgaria (BU)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	8-Sep-98	31-Dec-00
86	Headquarters (HQ)	Ministry of Education and the Environment	Colombia (CO)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	28-Oct-98	31-Dec-00
87	Headquarters (HQ)	Ministry of National Education	Cameroon (CM)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6-Nov-98	31-Dec-00
88	Headquarters (HQ)	Ministry of Education and Culture	Cyprus (CY)	Global Learning and Observations to benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	24-Nov-98	31-Dec-00

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
89	Headquarters (HQ)	Government of Uganda	Uganda (UG)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	26-Nov-98	31-Dec-00
90	Headquarters (HQ)	Ministry of Secondary, Higher Education and Scientific Research	Burkina Faso (UV)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	18-Dec-98	31-Dec-00
91	Headquarters (HQ)	Ministry of Environment	Lebanon (LE)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	23-Dec-98	31-Dec-00
92	Headquarters (HQ)	Department of Science and Technology	Philippines (RP)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	14-Jan-99	31-Dec-00
93	Headquarters (HQ)	Ministry of Education and Science	Latvia (LG)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	27-Jan-99	31-Dec-00
94	Headquarters (HQ)	Ministry of Education	Hungary (HU)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	10-Mar-99	31-Dec-00
95	Headquarters (HQ)	Government of Kuwait	Kuwait (KU)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12-Apr-99	31-Dec-00
96	Headquarters (HQ)	Ministry of Education	Ukraine (UP)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	27-May-99	31-Dec-00
97	Headquarters (HQ)	Federal Environmental Agency	United Arab Emirates (AE)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6-Jun-99	31-Dec-00
98	Headquarters (HQ)	Institute for the Promotion of Teaching Science and Technology	Thailand (TH)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	30-Sep-99	31-Dec-00
99	Headquarters (HQ)	Central Environmental Authority	Sri Lanka (CE)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	20-Dec-99	31-Dec-00
100	Headquarters (HQ)	Ministry of Education	New Zealand (NZ)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	29-Feb-00	31-Dec-00
101	Headquarters (HQ)	Ministry of Education	Panama (PM)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	2-Mar-00	31-Dec-00
102	Headquarters (HQ)	Ministry of Education	Nepal (NP)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3-Mar-00	31-Dec-00
103	Ames Research Center (ARC)	National Institute for Aerospace Technology (INTA)	Spain (SP)	Astrobiology Research: Life in the Universe	Project-Specific Agreement (PSA)	This agreement makes the Centro de Astrobiologia an Associated Institute of the NASA Astrobiology Institute (NUI). NUI's goal is to conduct interdisciplinary research in astrobiology. There is no expiration of this cooperation.	5-May-00	31-Dec-00

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
104	Goddard Space Flight Center (GSFC)	National Commission on Space Activities (CONAE)	Argentina (AR)	Amendment 1: Scientific Applications Satellite (SAC-C)	Project-Specific Agreement (PSA)	Amendment 1: Amendment to AR-0035-0, dated Oct. 28, 1996, to data analysis of "AM Constellation Data," comprised of SAC-C, Landsat 7, EO-1, and Terra.	14-Jun-00	31-Dec-20
105	Headquarters (HQ)	Government of Monaco	Monaco (MN)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	29-Jun-00	31-Dec-00
106	Headquarters (HQ)	The Ministry of Education and Youth	Bahamas, The (BF)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The Globe program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12-Jul-00	31-Dec-00
107	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	Implementing Arrangement (IA) Between NASA and the European Space Agency's (ESA) Concerning Provision of a Cupola in Exchange for NASA's Provision of Shuttle Launch and Return Services for Five External European Payloads	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) Pursuant to Articles 1.1 and 16.4 of the NASA/ESA ISS MOU, this Arrangement provides for the provision by ESA of a Cupola and additional goods and services to NASA for the ISS Program in exchange for NASA's provision of Space Shuttle launch and return transportation services for five ESA external ISS payloads.	7-Aug-00	31-Dec-20
108	Headquarters (HQ)	Ministry of Foreign Affairs	Cape Verde (CV)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	9-Aug-00	31-Dec-00
109	Headquarters (HQ)	Ministry of Environment and Forests	India (IN)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	25-Aug-00	31-Dec-00
110	Headquarters (HQ)	Ministry of Education and Higher Education	Qatar (QA)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	27-Sep-00	31-Dec-00
111	Headquarters (HQ)	Ministry of Science and Technology	Bangladesh (BG)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4-Oct-00	31-Dec-00
112	Headquarters (HQ)	Ministry of Education and Culture and the Secretariat of the Environment	Paraguay (PA)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	27-Oct-00	31-Dec-00
113	Headquarters (HQ)	Ministry of Education	Bahrain (BA)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	16-Jun-01	31-Dec-00
114	Johnson Space Center (JSC)	Canadian Space Agency (CSA)	Canada (CA)	An Implementing Arrangement (IA) Between NASA and The Canadian Space Agency (CSA) Regarding a Barter of International Space Station (ISS) Supporting Services and Utilization	Implementing Arrangement/Agreement (IA)	This is an Implementing Arrangement (IA) that is entered into pursuant to the Agreement among the Government of USA, Governments of Member States of the European Space Agency, the Government of Japan, Government of Canada Concerning Cooperation on the Civil ISS (the IGA) and the MOU between NASA/CSA Concerning Cooperation on the Civil International Space Station. This Arrangement details the understanding between NASA/CSA regarding a barter of ISS supporting services and utilization and regarding a Special Purpose Dexterous Manipulator (SPDM) and Other Goods and Services Towards Fulfillment of Its Common System Operations Responsibilities Within the Context of the ISS Program and more specifically the Optional Additional Offset detailed therein, this Arrangement provides for the exercise of the Optional/Additional Offset by Canada.	16-Aug-01	31-Dec-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
115	Headquarters (HQ)	Ministry of Education	Nigeria (NI)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	15-Jul-02	31-Dec-00
116	Headquarters (HQ)	Government of the Kingdom of Saudi Arabia	Saudi Arabia (SA)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	30-Sep-02	31-Dec-00
117	Headquarters (HQ)	Ministry of Education and Science	Lithuania (LH)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3-Oct-02	31-Dec-00
118	Headquarters (HQ)	Government of Yugoslavia (first)	Serbia (RI)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	17-Oct-02	31-Dec-00
119	Headquarters (HQ)	Ministry of Education	Liechtenstein (LS)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	26-Mar-03	31-Dec-00
120	Headquarters (HQ)	The Ministry of National Education	Gabon (GB)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	11-Aug-03	31-Dec-00
121	Headquarters (HQ)	Ministry of Education, Science, Technology and Scientific Research	Rwanda (RW)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	21-Aug-03	31-Dec-00
122	Headquarters (HQ)	The Environment Research Centre, Ministry of Home Affairs and Environment of the Republic of Maldives	Maldives (MV)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	8-Dec-03	31-Dec-00
123	Headquarters (HQ)	Ministry of Education of the Islamic Republic of Mauritania	Mauritania (MR)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6-Jul-04	1-Jan-00
124	Headquarters (HQ)	Ministry of Primary and Secondary Education of the Republic of Congo	Congo, Republic of (CF)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	28-Jul-05	31-Dec-00
125	Headquarters (HQ)	For the Ministry of Basic Education and Alphabetization	Niger (NG)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	11-Aug-05	31-Dec-00
126	Headquarters (HQ)	Ministry of Education	Ethiopia (ET)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	24-Aug-05	31-Dec-00
127	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Extension 1: 2001 Mars Odyssey	Project-Specific Agreement (PSA)	Extension 1: This mission extends our cooperation with the National Centre for Space Studies (CNES) on the NASA Mars Odyssey mission until the end of Mission Operations and data Analysis.	12-Apr-06	30-Apr-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
128	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Amendment 1: Cooperation on Mars Exploration Rover (MER 2003)	Project-Specific Agreement (PSA)	Amendment 1: This is a cooperative agreement between NASA and the Centre National d'Estudes Spatiales (CNES) on NASA's Mars Exploration Rover 2003 (MER 2003) Mission. MER 2003 will carry the Athena science payload. This cooperation includes support of French Co-investigator (Co-I). Dr. Claude d'Uston on the Athena Science Team. MER 2003 consists of two identical rovers that are to launch on two separate launch vehicles. CNES is responsible for providing: 1) Environmental testing facilities for the two APXS instruments; 2) Funding and other support, as appropriate, for Dr. Claude d'Uston to attend Athena Team meetings, training, testing, and to participate in MER 2003 surface operations at the Jet Propulsion Laboratory (JPL). NASA is responsible for providing: 1) Access to JPL facilities needed for Athena Team meetings, training, testing, and participation in MER 2003 surface operations.	18-Apr-06	31-Dec-20
129	Jet Propulsion Laboratory (JPL)	Niels Bohr Institute for Astronomy, Physics and Geophysics at the University of Copenhagen (NBI)	Denmark (DA)	Extension 1: Mars Exploration Rover (MER) 2003	Project-Specific Agreement (PSA)	Extension 1: Neil's Bohr Institute (NBI) will provide Permanent Magnet Array engineering and flight models for use on the rovers' Athena payloads. They will also support a Co-I.	16-May-06	31-Dec-20
130	Johnson Space Center (JSC)	Russian Federal Space Agency (Roskosmos)	Russia (UR)	Addendum 2: Implementing Arrangement entitled "Protocol Including Terms, Conditions and Assumptions, Summary Balance of Contribution and Obligations to International Space Station (ISS) and Resulting Rights of NASA and RSA to ISS Utilization Accommodations and Resources, and Flight Opportunities" (Balance Agreement) Between NASA and the Federal Space Agency of the Russian Federation	Implementing Arrangement/Agreement (IA)	Addendum 2: Also referred to as the "Second Addendum to the Balance Agreement," this Addendum adjusts the balance of the contributions of the Parties previously established in the original Balance Agreement and Addendum, due to changes in the timeline, programmatic changes, et. al. It effects a partial rebalance of the NASA and Roscosmos efforts regarding crew size and composition, science power platform and its arrays, upmass, habitation, electrical power, stowage, communication services, propellant, waste removal services, water, and liaison office and travel support through December 31, 2011. The Agreement will remain in force until such time as the MOU ceases to be in force.	1-Jul-06	31-Dec-20
131	Jet Propulsion Laboratory (JPL)	Russian Federal Space Agency (Roskosmos)	Russia (UR)	Amendment: Implementing Arrangement (IA) Agreement Between NASA and the Federal Space Agency, the Russian Federation, on the Flight of the Russian High Energy Neutron Detector (HEND) Instrument on the United States 2001 Mars Odyssey Orbiter Mission	Implementing Arrangement/Agreement (IA)	Amendment: Implementing Arrangement (IA): Russia will build a High Energy Neutron Detector (HEND) for inclusion on the gamma-ray spectrometer instrument on Mars Odyssey. This is an Implementing Agreement to the 1992 Agreement between the U.S. and Russia. This activity was initiated by interim agreement UR-0084. The mission was launched on April 7, 2001. Agreement does not expire until end of mission or we turn the instrument off.	18-Sep-06	30-Apr-20
132	Goddard Space Flight Center (GSFC)	University of Bern	Switzerland (SZ)	Interstellar Boundary Explorer (IBEX) Mission	Project-Specific Agreement (PSA)	The University of Bern, Switzerland, is cooperating with NASA on the Interstellar Boundary Explorer (IBEX) mission, by providing hardware and testing for the IBEX-Hi Pre-collimator, the IBEX-Lo Pre-collimator, and the IBEX-Lo Outer Electrostatic Analyzer.	18-Jan-07	31-Dec-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
133	All NASA Centers	National Centre for Space Studies (CNES)	France (FR)	Framework Agreement between U.S. Govt. and the French Govt. for cooperative activities in the Exploration and Use of Outer Space for Peaceful Purposes.	Umbrella/Framework Agreement (UM/FW)	Framework Agreement between U.S. Govt. and the French Govt. for cooperative activities in the Exploration and Use of Outer Space for Peaceful Purposes. NASA/CNES/NOAA are identified as implementing agencies. Agreement Signatories: Administrator Michael Griffin of the National Aeronautics and Space Administration (NASA) signed for the United States and Minister Francois Goulard of the Ministry for Higher Education and Research signed for France. Dipnote signed by the Department of State on 4/2/08, referring to the Embassy of France's note No. 505 dated 3/14/2008. Framework Signature Date: 1/23/2007; Entry into Force Date: 4/2/2008; Expiration Date: 4/2/2018.	23-Jan-07	2-Apr-00
134	Goddard Space Flight Center (GSFC)	European Space Agency (ESA)	European Space Agency (ESA)	Memorandum of Understanding (MOU) Between NASA and European Space Agency (ESA) Concerning the James Webb Space Telescope (JWST)	Project-Specific Agreement (PSA)	Memorandum of Understanding (MOU) Between NASA-ESA provides cooperation on the James Webb Space Telescope (JWST) Mission. Please note that the expiration date is December 31, 2019, or 6 (six) years after launch, whichever comes first. It was previously known as the Next Generation Space Telescope (NGST). Replaces all earlier agreements.	18-Jun-07	31-Dec-19
135	Headquarters (HQ)	Ministry of Education	Malta (MT)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	29-Nov-07	31-Dec-00
136	All NASA Centers	Indian Space Research Organization (ISRO)	India (IN)	NASA-Indian Space Research Organization (ISRO) Framework Agreement for Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes	Umbrella/Framework Agreement (UM/FW)	Under the NASA-Indian Space Research Organization (ISRO) Framework Agreement, cooperative programs may be undertaken in the following areas: Earth science, observation, and monitoring: Space Science: Exploration systems; Space operations; and other relevant areas of mutual interest....(review agreement for more details regarding what cooperation may be used when implementing....)	1-Feb-08	31-Jan-23
137	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES),European Organization for the Exploitation of Meteorological Satellites (EUMETSAT)	Multiple Signatories	Ocean Surface Topography Mission (OSTM)	Project-Specific Agreement (PSA)	The objective of the Ocean Surface Topography (OSTM) mission is to bring high-precision altimetry to a full operational status through the continuation of the TOPEX/Poseidon and Jason missions. OSTM will be launched aboard the Jason-2 satellite and will be a follow-on to the Jason mission. CNES will provide the PROTEUS platform for the Jason-2 satellite, which is scheduled to launch in June 2008 aboard a NASA-provided Boeing Delta II from Vandenberg Air Force Base, CA. OSTM will provide data for operational and research use for marine meteorology and sea state forecasting, operational oceanography, seasonal forecasting, climate monitoring, and ocean, Earth system, and climate research.	16-Apr-08	30-Jun-22
138	Headquarters (HQ)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	NASA-JAXA Joint Understanding	Umbrella/Framework Agreement (UM/FW)	This document is similar to a framework agreement wherein NASA and JAXA have agreed upon standard legal text when concluding lower-level cooperative letters of agreement. There is no contribution from either party.	16-Oct-08	31-Dec-00
139	Goddard Space Flight Center (GSFC)	Hartebeesthoek Radio Astronomy Observatory (HartRAO)	South Africa (SF)	Extension 1: Satellite Laser Ranging (SLR)	Project-Specific Agreement (PSA)	Extension 1: To strengthen the Hartebeesthoek Radio Astronomy Observatory (HartRAO) station measurement systems by adding a Satellite Laser Ranging (SLR) system to the station complement.	30-Apr-09	30-Sep-19

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
140	Ames Research Center (ARC),Dryden Flight Research Center(DFRC),George C. Marshall Space Flight Cente	Canadian Space Agency (CSA)	Canada (CA)	Framework Agreement Between the Government of the USA and the Government of Canada for Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes	Umbrella/Framework Agreement (UM/FW)	Joint activities in space exploration; space operations, including space flight; Earth and space science; civil aeronautics research, as it applies to space; and other relevant areas of mutual interest.	9-Sep-09	10-May-20
141	Headquarters (HQ)	European Space Agency (ESA)	European Space Agency (ESA)	Memorandum of Understanding (MOU) Between NASA/ European Space Agency (ESA) Concerning Cooperation in the Field of Space Transportation	Umbrella/Framework Agreement (UM/FW)	NASA/ESA will cooperate under this Memorandum of Understanding (MOU) to exchange available information and technical data on topics of common interest in the field of space transportation. They will develop, test, use technology insertion approaches, demonstrate, and analyze: re-ignitable cryogenic launch vehicle and spacecraft stages and engines, including relevant ground and flight demonstrators for propulsion and propellant management applications; approaches and engineering methods for establishing and maintaining qualification of launch systems including associated ground infrastructure; establish and maintain qualification of launch systems and ground infrastructure; for structures and materials of launch vehicle stages, boosters, and engine nozzles; payload shroud development approach; approaches for improvement of engineering methods and correlations with test for pressure oscillations of solid boosters, launch vehicle environments, and induced loads; human rating approaches for launch systems and crew transportation systems, including their associated ground infrastructure; approaches for vehicle assembly, integration, test, and operations at launch complexes; architectures, development, test, technology insertion, and deployment approaches for lunar landers and surface systems; and cargo and crew transportation systems, including docking interface, requirements definition, design, verification, and implementation.	11-Sep-09	11-Sep-19

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
142	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Magnetospheric Multiscale Mission (MMS)	Implementing Arrangement/Agreement (IA)	NASA/CNES's mission is to promote and guide space research and technology for scientific and technical purposes. NASA's mission is to pioneer the future in space exploration, scientific discovery, and aeronautics research; to consider their mutual interest in cooperating on the Magnetospheric Multiscale (MMS) mission; to recall the terms of the Framework Agreement between the Government of the United States of America and the Government of the French Republic for Cooperative Activities in the Exploration and Use of Outer Space for Peaceful Purposes, signed on January 23, 2007, (hereinafter referred to as the "Framework Agreement") applicable to this Implementing Arrangement between NASA and CNES, acting as Implementing Agencies; The purpose of this Implementing Arrangement is to set forth the respective responsibilities of the Implementing Agencies and the terms and conditions under which they will cooperate with the MMS mission. Description of the MMS Mission: NASA's Science Mission Directorate (SMD) is sponsoring the development of the MMS mission which is a project in the Solar Terrestrial Probes (STP) program. The MMS mission will explore the Earth's magnetosphere with a constellation off our spacecraft with identical scientific payloads. Measurements made by these four spacecraft will help to explain the fundamental physical processes involved with magnetic re-connection and particle acceleration and turbulence on both the micro and mesoscales.	17-Sep-09	17-Sep-19
143	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement (IA) Between NASA and the National Centre for Space Studies (CNES) on the Mars Atmosphere and Volatile Evolution (MAVEN) Mission	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) between NASA and CNES to provide the Solar Wind Electron Analyzer (SWEA) analyzer, a component of the SWEA instrument, for flight on the NASA MAVEN mission.	17-Sep-09	17-Sep-19
144	Goddard Space Flight Center (GSFC)	Birla Institute of Technology, Extension Center Jaipur in Rajasthan	India (IN)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA provides AERONET instrument and support. Partner agrees to provide maintenance.	9-Nov-09	15-Oct-19
145	Headquarters (HQ)	Ministry of Education of the Sultanate of Oman	Oman (MU)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE Program is an international environmental science and education program that brings students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle, and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community.	8-Dec-09	1-Jan-00
146	Goddard Space Flight Center (GSFC)	Middle East Technical University (METU), Institute of Marine Sciences (IMS)	Turkey (TU)	Agreement for Cooperation Between NASA and Middle East Technical University (METU), Institute of Marine Sciences (IMS), Turkey, on the Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	Agreement for Cooperation Between NASA and Middle East Technical University (METU), Institute of Marine Sciences (IMS), Turkey, on the Aerosol Robotic Network (AERONET)	29-Jan-10	30-Mar-20
147	George C. Marshall Space Flight Center (MSFC)	University of Bern	Switzerland (SZ)	Agreement for the Strofio Instrument on the BepiColombo Mission	Project-Specific Agreement (PSA)	The University of Bern in Switzerland will provide the ion source system for the Strofio instrument that will be a part of the Serena payload on the ESA-led BepiColombo mission to Mercury.	10-Mar-10	30-Sep-22
148	Goddard Space Flight Center (GSFC)	Swedish National Space Board (SNSB)	Sweden (SW)	Implementing Arrangement (IA) Between NASA and the Swedish National Space Board (SNSB) of the Kingdom of Sweden on the Magnetospheric Multiscale (MMS) Mission	Implementing Arrangement/Agreement (IA)	Cooperation is between NASA and SNSB under the U.S. - Kingdom of Sweden Civil Space Framework Agreement.	23-Mar-10	23-Mar-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
149	Goddard Space Flight Center (GSFC)	Brazilian Space Agency (AEB)	Brazil (BR)	Amendment 1: Space Geodesy: Space Geodetic Research and Global Positioning System (GPS)	Implementing Arrangement/Agreement (IA)	To establish one or more permanent Global Positioning System (GPS) ground stations in Brazil, with the first agreed upon station to be located at the INPE, Cachoeira Paulista, SP (Brazil). Implementing Arrangement under the Framework.	8-Apr-10	30-Apr-20
150	Goddard Space Flight Center (GSFC)	National Commission on Space Activities (CONAE)	Argentina (AR)	Amendment 1: The Aquarius/SAC-D Mission Memorandum of Understanding (MOU)	Project-Specific Agreement (PSA)	Amendment 1: This Memorandum of Understanding (MOU) between NASA and the National Commission on Space Activities (CONAE) will contribute to the understanding of the total Earth system and the effects of natural and human-induced changes on the global environment. The measurements performed by the Aquarius/SAC-D Mission will contribute to a better understanding of ocean circulation, the prediction of changes in circulation, and its impact on Earth's climate and water cycle.	21-Jun-10	30-Jun-20
151	Headquarters (HQ)	National Centre for Space Studies (CNES),European Organization for the Exploitation of Meteorological Satellites (EUMETSAT)	Multiple Signatories	Memorandum of Understanding (MOU) among National Oceanographic and Atmospheric Administration (NOAA), NASA, European Organization for the Exploitation of Meteorological Satellites (EUMETSAT) and National Center for Space Studies [Centre National d'Estudes Spatiales] (CNES) for Cooperation in the Jason-3 Program	Project-Specific Agreement (PSA)	Memorandum of Understanding (MOU): The Jason-3 Program will design to provide continuity to the accuracy and coverage of the Topex/Poseidon, Jason-1 and OSTM/Jason-2 missions. These three missions collected data for scientific research and support operational applications related to extreme weather events, operational oceanography, climate applications and forecasting. NOAA and The European Organization for the Exploitation of Meteorological Satellites (EUMETSAT) are the lead agencies. NASA and CNES are providing hardware to NOAA and EUMETSAT under separate domestic agreements. NASA's involvement in collaborative activities is very limited -- NASA is supporting NOAA in science selection and, in return, obtaining science data.	13-Jul-10	31-Dec-30
152	Headquarters (HQ)	National Centre for Space Studies (CNES)	France (FR)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE Program is an international environmental science and education program that brings students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle, and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community.	16-Sep-10	16-Sep-20
153	Goddard Space Flight Center (GSFC)	The King Abdulaziz City for Science and Technology (KACST)	Saudi Arabia (SA)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	To establish sun photometer system(s) to improve the understanding of the properties and concentration of aerosols and their relationship to aerosols on global and regional scales.	2-Oct-10	2-Oct-20
154	Goddard Space Flight Center (GSFC)	The King Abdulaziz City for Science and Technology (KACST)	Saudi Arabia (SA)	Space Geodesy: Agreement with King Abdulaziz City for Science and Technology in Saudi Arabia (KACST)	Project-Specific Agreement (PSA)	Space Geodesy: Agreement with King Abdulaziz City for Science and Technology in Saudi Arabia (KACST) for Space Geodesy and geodynamics research.	2-Oct-10	2-Oct-20
155	Ames Research Center (ARC)	German Aerospace Center (DLR)	Germany (GM)	Agreement Between NASA and DLR for Associate Membership in the NASA Lunar Science Institute (NLSI)	Project-Specific Agreement (PSA)	Agreement provides for associate membership of DLR and its related organizations in the NASA Lunar Science Institute (NLSI).	8-Dec-10	8-Dec-20
156	Ames Research Center (ARC)	University of New South Wales	Australia (AS)	Astrobiology Associate Partnership Agreement	Project-Specific Agreement (PSA)	The agreement provides for cooperation between NASA and the University of New South Wales (UNSW) in the field of astrobiology and analogue research by making UNSW an Associate Member of the NASA Astrobiology Institute.	9-Dec-10	30-Jun-20
157	Headquarters (HQ)	German Aerospace Center (DLR)	Germany (GM)	Framework Agreement Between NASA and the German Aerospace Center (DLR) On Cooperation in Aeronautics and the Exploration and Use of Outer Space for Peaceful Purposes	Umbrella/Framework Agreement (UM/FW)	Framework Agreement between NASA and DLR on Cooperation in Aeronautics and the Exploration and Use of Outer Space for Peaceful Purposes.	13-Dec-10	12-Dec-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
158	Goddard Space Flight Center (GSFC)	European Space Agency (ESA)	European Space Agency (ESA)	Reimbursable Space Act Agreement Between NASA and the European Space Agency (ESA) for Ongoing NASA Tracking and Data Relay Satellite System (TDRSS) Support of the Automated Transfer Vehicle (ATV)	Project-Specific Agreement (PSA)	NASA will provide to ESA, on a reimbursable basis, TDRSS services in support of the launch, free flight, docking, undock, and re-entry of each ATV Mission.	16-Dec-10	31-Dec-20
159	Headquarters (HQ)	Federative Republic of Brazil	Brazil (BR)	Framework Agreement on Cooperation in the Peaceful Uses of Outer Space	Umbrella/Framework Agreement (UM/FW)	This is a Framework Agreement between the United States Government and the Government of the Federative Republic of Brazil on the cooperation in the peaceful uses of outer space. Recalling their useful cooperation through implementation of cooperative activities in a broad range of space science and applications areas and considering the desirability of enhanced cooperation between the agencies have potential benefits to all nations.	19-Mar-11	19-Mar-31
160	Goddard Space Flight Center (GSFC)	Gorongosa Restoration Project	Mozambique (MZ)	Agreement Between NASA and the Gorongosa Restoration Project of Mozambique for Cooperation in the Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA has established a global network of sun photometers (AERONET) in cooperation with a wide range of international partner agencies and institutions. These devices are used to measure water vapor and aerosol optical properties, which are necessary measurements as well as being essential for ground-based validation for aerosol measurements taken by satellites. For the proposed arrangement, NASA and GRP will establish one or more sun photometer stations at mutually agreed sites. The inclusion of these stations within the global AERONET will significantly improve the understanding of the properties and concentration of aerosols and their relationship to aerosols on both global and regional scales. Another objective of this cooperation is to encourage scientists from both the United States and Mozambique to develop research programs using data collected in Mozambique along with aerosol data available from the global AERONET database located at NASA's Goddard Space Flight Center (GSFC) in Greenbelt, Maryland.	25-Mar-11	20-Feb-21
161	Goddard Space Flight Center (GSFC)	Moscow State University (MSU)	Russia (UR)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and Moscow State University will continue to cooperate on the operation of an AERONET sunphotometer station located at Moscow State University. NASA provides the equipment, and Moscow State University provides the site.	31-Mar-11	31-Mar-21
162	Goddard Space Flight Center (GSFC)	University of Lille 1	France (FR)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and University of Lille 1 will cooperate in the creation of an AERONET sunphotometer station located at University of Lille 1. NASA provides the equipment and University of Lille 1 provides the site.	4-Apr-11	15-Feb-21

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
163	Ames Research Center (ARC)	Institute of Space and Astronautical Science (ISAS)	Japan (JA)	Extension of the Memorandum of Understanding (MOU) Between NASA and the Institute and Astronautical Science of Japan Concerning Activities Related to the MU Space Engineering Spacecraft-C (MUSES-C) Program	Project-Specific Agreement (PSA)	Extension of the Memorandum of Understanding (MOU): MUSES-C or Hayabusa is an Institute of Space and Astronautical Science (ISAS), or Japan Aerospace Exploration Agency (JAXA) technology demonstration mission designed to rendezvous with a near-Earth asteroid and to return samples of that asteroid to Earth. NASA responsibilities include providing for heat shield testing, technical review, backup DSN tracking, telemetry, and command support activities, radiometric navigation support, U.S. scientist participation, and ground-based observation support while JAXA responsibilities include providing for the MUSES-C spacecraft, launch, overall mission operations and design, access to NASA of asteroid samples obtained, and Japanese researchers. MUSES-C, a near-Earth asteroid mission. It applies to: mission development; launch; in-flight and asteroid encounter mission operations; sample return and recovery; and sample and other data analysis. The Parties shall cooperate according to the Exchange of Notes and this Memorandum of Understanding (MOU). MUSES-C is an ISAS technology demonstration mission with scientific purposes designed to rendezvous with a near-Earth asteroid and to return samples of that asteroid to Earth. Missing Japanese Diplomatic note from the record. Will try to obtain.	22-Apr-11	25-Apr-21
164	Goddard Space Flight Center (GSFC)	Jacob Blaustein Institute for Desert Research, Ben-Gurion University of the Negev	Israel (IS)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and Ben Gurion University will continue to cooperate on the operation of an AERONET sunphotometer station located at Ben Gurion University's Jacob Blaustein Institutes for Desert Research. NASA provides the equipment, and Ben Gurion University provides the site.	26-Apr-11	30-Apr-21
165	Goddard Space Flight Center (GSFC)	Norwegian Mapping Authority (NMA)	Norway (NO)	Space Geodesy: Norwegian Mapping Authority (NMA) Agreement	Project-Specific Agreement (PSA)	An agreement for cooperation in the field of space geodesy, including Satellite Laser Ranging (SLR), Very Long Baseline Interferometry (VLBI), and Global Navigation Satellite Systems (GNSS).	27-Apr-11	31-Dec-20
166	Headquarters (HQ)	Norwegian Space Centre (NSC)	Norway (NO)	Implementing Arrangement (IA) Between NASA and the Norwegian Space Centre (NSC) on the Use of Analogue Sites Within the U.S. and Norway	Project-Specific Agreement (PSA)	Implementing Arrangement (IA) under the Agreement between the United States of America and the Kingdom of Norway for Cooperation in the Civil Uses of Outer Space. This IA covers cooperation in the use of analogue sites in each others' countries.	10-May-11	10-May-21
167	Ames Research Center (ARC)	Swedish National Space Board (SNSB)	Sweden (SW)	Implementing Arrangement (IA) Between the NASA and the Swedish National Space Board (SNSB) for Cooperation in Aeronautic and Space Research Using Nanosatellite Technologies	Implementing Arrangement/Agreement (IA)	IA under the Framework Agreement between the Government of the United States and the Government of the Kingdom of Sweden for Cooperative Activities in the Exploration and Use of Outer Space of Peaceful Purposes, for cooperation on NanoSat technologies.	19-May-11	19-May-21
168	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement (IA) Between NASA and the National Centre for Space Studies (CNES) on the Juno Mission	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) between NASA and CNES to provide researchers and a portion of the Jovian Auroral Distribution Experiment (JADE) on the NASA Juno mission. This IA is under the U.S.-French Umbrella.	17-Jun-11	31-Dec-19
169	Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Italy (IT)	Memorandum of Understanding (MOU) Between NASA and Agencia Spaziale Italia (ASI) Concerning the Juno Mission	Project-Specific Agreement (PSA)	This Memorandum of Understanding (MOU) covers cooperation between NASA and the Italian Space Agency (ASI) on the Juno mission to Jupiter. ASI is providing the Jovian Infrared Auroral Mapper (JIRAM) and Ka-Band Transponder (Ka-T) instruments.	22-Jun-11	31-Dec-19
170	Goddard Space Flight Center (GSFC)	Yonsei University	Korea, Republic of (KS)	Agreement Between NASA and Yonsei University of Korea for Cooperation in the Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA loans one or more sun photometers and related equipment for use and participation in the AERONET program.	23-Jun-11	30-Apr-21

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
171	Goddard Space Flight Center (GSFC)	Kinki University	Japan (JA)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	Agreement establishes sun photometer stations in Japan, Shirahama (Wakayama Prefecture).	24-Jun-11	31-Mar-21
172	Johnson Space Center (JSC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Calorimetric Electron Telescope (CALET)	Project-Specific Agreement (PSA)	The cooperation involves NASA science participation, mission support, and ISS utilization support for the JAXA Calorimetric Electron Telescope (CALET) payload for the ISS, to be launched on an HTV. The activity crosses mission directorates and includes significant Science Mission Directorate, Space Science, Astrophysics activities as well.	11-Jul-11	31-Dec-20
173	Goddard Space Flight Center (GSFC)	Universidad Nacional de Colombia	Colombia (CO)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and Universidad Nacional de Colombia will continue to cooperate on the operation of an AERONET sunphotometer station located at mutually agreed sites in Colombia. NASA provides the equipment, and Universidad Nacional de Colombia provides the sites.	12-Jul-11	30-Apr-21
174	Goddard Space Flight Center (GSFC)	Silpakorn University	Thailand (TH)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and Silpakorn University will continue to cooperate on the operation of an AERONET sunphotometer station located at mutually agreed sites in Thailand. NASA provides the equipment, and Silpakorn University provides the sites.	14-Jul-11	30-Apr-21
175	Goddard Space Flight Center (GSFC)	Centre Royal de Teledetection Spatiale	Morocco (MO)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and Centre Royal de Teledetection Spatiale will continue to cooperate on the operation of an AERONET sunphotometer station located at mutually agreed sites in Morocco. NASA provides the equipment, and Centre Royal de Teledetection Spatiale provides the sites.	15-Jul-11	30-Apr-21
176	Goddard Space Flight Center (GSFC)	Deutsches Museum	Germany (GM)	Loan of items from Wilkinson Microwave Anisotropy Probe (WMAP) Satellite to Deutsches Museum	Project-Specific Agreement (PSA)	Loan of Artifacts from WMAP to Germany's Deutsche Museum.	20-Jul-11	31-Dec-20
177	Headquarters (HQ)	LEGO System A/S	Denmark (DA)	Agreement Between NASA and the LEGO System A/S of Denmark Concerning the Juno Mission	Project-Specific Agreement (PSA)	The agreement is for the purpose of affixing three LEGO mini-figures (the hardware) on NASA's Juno mission to Jupiter and provides for the development and performance of Juno mission-related educational and public outreach activities. NASA and LEGO responsibilities include developing and implementing educational and outreach activities, providing design, fabrication, and integration specifications for the LEGO hardware, and incorporating LEGO hardware onto the exterior of the Juno spacecraft.	2-Aug-11	2-Aug-19
178	Goddard Space Flight Center (GSFC)	Brazilian Space Agency (AEB)	Brazil (BR)	Extension 1: Space Geodesy: Very Long Baseline Interferometry (VLBI)	Project-Specific Agreement (PSA)	Extension 1: NASA and the Brazilian Space Agency (AEB) will continue to cooperate on space geodesy with emphasis in VLBI. NASA loans equipment to AEB, and AEB operates a station. Cooperative space geodesy program with emphasis on the techniques and science derived from Very Long Baseline Interferometry (VLBI) IA under the Framework.	15-Aug-11	31-Aug-21
179	Langley Research Center (LaRC)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement (IA) Between NASA and the National Centre for Space Studies (CNES) for the Cloud-Aerosol Lidar and Infrared Pathfinder Satellite Observations (CALIPSO) Mission	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) to continue the operations of the joint NASA-CNES CALIPSO mission. Replaces the original Memorandum of Understanding (MOU) for this cooperation.	8-Sep-11	31-Mar-22
180	Goddard Space Flight Center (GSFC)	Universiti Sains Malaysia	Malaysia (MY)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and Universiti Sains Malaysia (USM) will cooperate on the operation of an AERONET sunphotometer station located at USM. NASA provides the equipment, and USM provides the site.	13-Sep-11	31-May-21

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
181	Goddard Space Flight Center (GSFC)	University of Liege	Belgium (BE)	Belgium (CSL/BELSPO) Solar Probe Plus (SPP) Letter of Agreement	Project-Specific Agreement (PSA)	NASA will develop the Solar Probe Plus (SPP), a spacecraft equipped to perform scientific studies of the Sun. The primary scientific objectives to be carried out during the mission include: to determine the structure and dynamics of the magnetic fields at the sources of both fast and slow solar wind; to trace the flow of energy that heats the corona and accelerates the solar wind; and to determine what mechanisms accelerate and transport energetic particles. Instruments include a wide-field imager, fast ion analyzer, fast electron analyzer, energetic particle instrument, magnetometer, and plasma wave instrument. This Agreement will cover the Belgian contributions to the SPP mission, specifically the contributions to the modeling, testing, and evaluation of the WISPR Investigation on the SPP.	10-Oct-11	30-Sep-26
182	Goddard Space Flight Center (GSFC)	Institute of Atmospheric Optics, Siberian Branch, Russian Academy of Sciences	Russia (UR)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and the Institute of Atmospheric Optics, Siberian Branch, Russian Academy of Sciences (IAO SB RAS) will cooperate on the operation of an AERONET sunphotometer station. NASA provides the equipment and IAO SB RAS provides the site.	14-Oct-11	23-May-22
183	Goddard Space Flight Center (GSFC)	Central Geophysical Observatory (CGO), Institute of Geophysics, Polish Academy of Sciences (PAS)	Poland (PL)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and the Polish Academy of Sciences will cooperate on the operation of an AERONET sunphotometer station located at the Institute of Geophysics. NASA provides the equipment, and the Polish Academy of Sciences provides the site.	25-Oct-11	30-Jun-21
184	All NASA Centers	Government of Argentina	Argentina (AR)	Framework Agreement Between the Government of the United States of America and the Government of the Argentine Republic on Cooperation in the Peaceful Uses of Outer Space	Umbrella/Framework Agreement (UM/FW)	This Agreement provides the parties with the foundation to needed to identify areas of mutual interest and seek to develop cooperative programs or projects, hereinafter referred to as Programs, in the exploration and peaceful uses of outer space and shall work closely together to this end. The agreement was signed on October 25, 2011 and entered into force on July 30, 2013 when the second of two dip notes was exchanged. The agreement will be in force for 10 years from July 30, 2013.	25-Oct-11	30-Jul-23
185	Jet Propulsion Laboratory (JPL)	National Commission on Space Activities (CONAE)	Argentina (AR)	Space Geodesy: Ground Stations	Project-Specific Agreement (PSA)	NASA and the National Commission on Space Activities (CONAE) will establish one or more permanent geodetic ground stations, with the first agreed-upon station to be located at the Teofilo Tabanera Space Center of CONAE in Cordoba, Argentina. These stations will contribute data to the Global Geodetic Observing System (GGOS) to improve the accuracy of global and regional geodetic measurements.	26-Oct-11	26-Oct-21
186	Wallops Flight Facility (WFF)	Brazilian Space Agency (AEB)	Brazil (BR)	NASA-Brazilian Space Agency (AEB) Implementing Arrangement (IA) for Participation in the Ozone Cooperation Mission	Implementing Arrangement/Agreement (IA)	The objective of this mission is to study the concentrations of various atmospheric constituents in order to contribute to the understanding of the Earth's ozone layer, its generation, and its depletion, and to help to calibrate and verify satellite remote sensors.	27-Oct-11	27-Oct-21
187	Goddard Space Flight Center (GSFC)	Brazilian Space Agency (AEB)	Brazil (BR)	NASA-Brazilian Space Agency (AEB) Implementing Arrangement (IA) for Participation in the Global Precipitation Measurement (GPM) Mission	Implementing Arrangement/Agreement (IA)	The GPM mission is a NASA-led, international space initiative to understand global precipitation. The data acquired by the GPM mission will be beneficial for monitoring and predicting climatological and meteorological changes and for improving the accuracy of weather and precipitation forecasts.	27-Oct-11	27-Oct-21

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
188	Goddard Space Flight Center (GSFC)	Canadian Space Agency (CSA)	Canada (CA)	Soil Moisture Active Passive (SMAP) Mission	Implementing Arrangement/Agreement (IA)	SMAP is one of the first four tier one Earth science missions recommended by the U.S. National Research Council's Earth Science Decadal Survey. SMAP is designed to enable scientists to study Earth's water, energy and carbon cycles across the entire planet. SMAP expects to employ a dedicated spacecraft with an instrument suite that is planned for launch into a near-polar, sun-synchronous orbit on an expendable launch vehicle no earlier than 2014.	21-Nov-11	21-Nov-21
189	Goddard Space Flight Center (GSFC)	Bermuda Biological Station for Research, Inc.	Bermuda (BD)	Extension 1: Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	Extension 1: NASA and Bermuda Institute of Ocean Sciences (BIOS) will continue to cooperate on the operation of an AERONET sunphotometer station located at BIOS. NASA provides the equipment, and BIOS provides the site.	28-Nov-11	19-Jul-22
190	Goddard Space Flight Center (GSFC)	Tartu Observatory	Estonia (EN)	Amendment and Extension 1: Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	Amendment and Extension 1: NASA and Tartu Observatory will continue to cooperate on the operation of an AERONET sunphotometer station located at Tartu Observatory. NASA provides the equipment, and Tartu Observatory provides the site.	14-Dec-11	31-Mar-22
191	Johnson Space Center (JSC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Amendment 1: Reimbursable Space Act Agreement Between NASA and the Japan Aerospace Exploration Agency (JAXA) on JAXA's Use of NASA's Common Spares Pool (CSP) to Support the Japanese Experiment Module (JEM)	Implementing Arrangement/Agreement (IA)	Amendment 1 to replace Articles II-VII in their entirety, which updated language to reflect the retirement of the Shuttle and to provide for the Spares Analysis and JAXA payment for estimated CSP requirements through 2020. The Basic Agreement between NASA and JAXA, which enabled JAXA to use the Common Spares Pool, on a reimbursable basis to NASA, for spares/repair parts to maintain the ISS-JEM. The Basics Agreement also supersedes and terminates the previous CSP-JEM Agreement between NASA and JAXA.	3-Feb-12	31-Dec-20
192	Goddard Space Flight Center (GSFC)	Russian Academy of Sciences	Russia (UR)	Space Geodesy: Agreement for Cooperation in the Field of Space Geodesy	Project-Specific Agreement (PSA)	NASA and the Russian Academy of Sciences (RAS) cooperate in the operation of a space geodetic station in Russia. NASA loans space geodetic equipment to RAS on a long-term basis, and RAS operates and maintains the station.	8-Feb-12	31-Aug-21
193	Goddard Space Flight Center (GSFC)	European Space Agency (ESA)	European Space Agency (ESA)	Memorandum of Understanding (MOU) Between the European Space Agency (ESA) and NASA Concerning the Solar Orbiter Mission	Project-Specific Agreement (PSA)	The Solar Orbiter (SO) mission will be specifically devoted to solar and heliospheric physics, providing close-up and high-latitude observations of the Sun. The goal of the mission will be to explore the near-Sun environment to improve the understanding of how the Sun determines the environment of the inner solar system and, more broadly, generates the heliosphere itself, and how fundamental plasma physical processes operate near the Sun. SO is an international collaboration comprising many science instruments and suites, including one instrument and one sensor provided by NASA. ESA will provide the spacecraft, while NASA will provide the launch. The SO orbiter collaboration is taking place within ESA's Cosmic Vision line of missions within the Science Programme. The SO mission is currently planned for a 2017 launch date, with the end of the nominal mission set for 2024.	6-Mar-12	31-Dec-25

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
194	Headquarters (HQ)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement (IA) Between NASA and the German Aerospace Center (DLR) for Cooperation on the Solar Probe Plus (SPP) Mission	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) Between NASA and DLR that will develop the Solar Probe Plus (SPP), a spacecraft equipped to perform scientific studies of the Sun. NASA plans to launch the SPP in 2018 from Cape Canaveral, Florida, aboard an Atlas V class launch vehicle. The primary scientific objectives, to be carried out during the mission, will be to determine the structure and dynamics of the magnetic fields at the sources of both fast and slow solar wind, to trace the flow of energy that heats the corona and accelerates the solar wind, and to determine what mechanisms accelerate and transport energetic particles. Instruments include a wide-field imager, fast ion analyzer, fast electron analyzer, energetic particle instrument, magnetometer, and plasma wave instrument. DLR and NASA will be cooperating on the Wide Field Imager for Solar Probe (WISPR) Investigation on the SPP mission. WISPR will track density fluctuations in the solar corona by imaging visible sunlight scattered by electrons in the corona as the spacecraft traverses through its perihelion passes. International participation on this mission also includes France and Belgium.	20-Mar-12	30-Sep-26
195	Headquarters (HQ)	Commonwealth Scientific and Industrial Research Organization (CSIRO),Government of Australia	Australia (AS)	Extension 2: NASA Balloon Launches from Australia	Project-Specific Agreement (PSA)	Extension 2: Diplomatic-level exchange of notes combining the terms of two prior agreements for the launching of balloons in Australia on July 16 and October 18, 1984, and the launching of long-duration balloon flights beyond Australia on January 24 and July 24, 1985.	24-Apr-12	12-Jun-22
196	Headquarters (HQ)	Russian Federal Space Agency (Roskosmos)	Russia (UR)	Amendment 4: Agreement Between the United States of America and the Russian Federation Concerning Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes	Umbrella/Framework Agreement (UM/FW)	Amendment 4: Extended by an exchange of diplomatic notes. Government to Government Agreement between the U.S. and the Russian Federation for Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes. Crosscutting. Dip Notes extended the Agreement from June 17, 2007, through June 16, 2012. Russia Dip Note No. 10778 dated 3 Dec 2007, U.S. Dip Note MFA No. 153-07, dated 26 Dec 2007, and State Cable 169755 delivered U.S. Dip Note on 27 Dec 2007.	18-Jun-12	31-Dec-20
197	Goddard Space Flight Center (GSFC)	University of Dhaka	Bangladesh (BG)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and the University of Dhaka will cooperate on the operation of an AERONET sunphotometer station located at the University of Dhaka. NASA provides the equipment, and the University of Dhaka provides the site.	11-Jul-12	30-Jun-22
198	Goddard Space Flight Center (GSFC)	Canadian Space Agency (CSA)	Canada (CA)	Implementing Arrangement (IA) Between NASA and Canadian Space Agency (CSA) for Cooperation on the Icebridge Mission and Sounding Rocket Research	Implementing Arrangement/Agreement (IA)	The cooperation is an Implementing Arrangement (IA) under the U.S.-Canada Civil Space Agreement. An exchange of research aircraft time on the Icebridge mission for sounding rocket motors.	13-Sep-12	31-Mar-20
199	Goddard Space Flight Center (GSFC)	University of Liege	Belgium (BE)	Solar Orbiter Collaboration	Project-Specific Agreement (PSA)	The Centre Spatial de Li'ge (Universite de Liege) will provide engineering support to the NASA-provided SoloHi instrument on the European Space Agency (ESA)-led Solar Orbiter mission. The Belgian Federal Science Policy Office (BELSPO) is providing the funding.	2-Oct-12	31-Dec-25
200	Goddard Space Flight Center (GSFC)	University of Bern	Switzerland (SZ)	Solar Orbiter Collaboration	Project-Specific Agreement (PSA)	University of Bern will calibrate the NASA-provided Heavy Ion Spectrometer (HIS) instrument for the European Space Agency (ESA) -led Solar Orbiter mission.	15-Oct-12	31-Dec-25

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
201	Goddard Space Flight Center (GSFC)	Ministry of International Trade and Industry (MITI)	Japan (JA)	Amendment to Implementing Arrangement (IA) for Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) on Earth Observing System (EOS)	Implementing Arrangement/Agreement (IA)	The purpose of this Implementing Arrangement (IA) is to establish that the Parties will undertake scientific and technical cooperation for flight of the ASTER instrument on the NASA EOS-AM1 platform. The Parties jointly undertake this program with the purpose of furthering cooperation in global change research by enabling the multidisciplinary study and long-term systematic monitoring of the Earth, including research involving data from all Earth observing platforms contained in the IEOS and related activities of the IGBP, such as sensor calibration and data validation. Amendment to the IA - IA does not expire until end of mission.	19-Oct-12	24-Oct-19
202	Headquarters (HQ)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement (IA) Between NASA and German Aerospace Center (DLR) for Cooperation - Program/Project Management Training	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) Between NASA and DLR. Office of Chief Engineer. Academy for Program/Project and Engineering Leadership (APPEL) program will lead this cooperation. The parties will exchange best practices, knowledge sharing opportunities, and related experiences about program/project management.	29-Nov-12	29-Nov-22
203	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	Barter of Goods and Services in Support of International Space Station Operations	Implementing Arrangement/Agreement (IA)	Barter of goods and services in support of International Space Station operations.	13-Dec-12	31-Dec-20
204	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	Offset of European Space Agency's (ESA) Responsibility for Common Systems Operating Costs (CSOC) and Cargo Transportation to the International Space Station (ISS)	Implementing Arrangement/Agreement (IA)	Offset of ESA's responsibility for Common System Operations Costs (CSOC), and Compensation for the transportation of ESA cargo to and from the ISS, through the provision of cargo delivery capability aboard the ESA Automated Transfer Vehicles (ATVs) or of other agreed items, or payment of funds.	13-Dec-12	31-Dec-21
205	Goddard Space Flight Center (GSFC)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Solar Orbiter Agreement - Heavy Ion Sensor (HIS)	Project-Specific Agreement (PSA)	Agreement for the fabrication, delivery, integration, and data for the NASA-provided HIS to Mullard Space Science Laboratory (MSSL) for integration with the UK Space Agency-provided Solar Wind Analyzer (SWA) instrument suite. The SWA will be integrated onto the ESA-provided Solar Orbiter spacecraft. This Agreement includes provisions for interface coordination, delivery of the payload and its components to the Parties for testing, integration, and science data and data products sharing and archiving.	19-Feb-13	31-Dec-25
206	Headquarters (HQ)	Government of the Italian Republic	Italy (IT)	Framework Agreement Between the Government of the United States of America and the Government of the Italian Republic for Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes	Umbrella/Framework Agreement (UM/FW)	Government to Government Agreement between the U.S. and the Italian Republic for Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes signed on March 19, 2013. This Agreement enters into force on the date of the last note of an exchange of diplomatic notes in which the Parties notify each other of the completion of their internal procedures necessary for the entry into force of this Agreement. (Italy Note Verbale signed January 19, 2016. Dept. of State Dip Note 195 stamped February 18, 2016.)	19-Mar-13	19-Mar-23
207	Goddard Space Flight Center (GSFC)	Southeast Asia Start Regional Center (SEA START RC), Chulalongkorn University	Thailand (TH)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	Cooperation on Aerosol Robotic Network (AERONET). NASA provides AERONET instruments on loan; Southeast Asia START Regional Center provides location and local operations.	1-Apr-13	28-Feb-23
208	George C. Marshall Space Flight Center (MSFC)	Space Research Institute (IKI), Russian Academy of Sciences (RAS)	Russia (UR)	Space Research Institute of the Russian Academy of Sciences (IKI): Cooperation on the ART-XC Instrument Onboard the Russian Spectrum Roentgen Mission (SPG)	Project-Specific Agreement (PSA)	NASA will provide four mirror modules for portions of science data from the Russian Instrument.	6-Apr-13	31-Dec-25

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
209	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement (IA) Between NASA and the National Centre for Space Studies (CNES) of France on the Scientific Instruments of the Solar Probe Plus (SPP) Payload	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) Between NASA and CNES as NASA's Science Mission Directorate is sponsoring the development of the SPP mission, which is a project in the Living with a Star Program, a series of missions designed to gather critical information about the Sun and its effects on Earth, human activities, and other planetary systems. NASA will develop the SPP, a spacecraft equipped to perform scientific studies of the Sun. NASA plans to launch the SPP in 2018 from Cape Canaveral, Florida. CNES is sponsoring French collaboration on the FIELDS investigation, which consists of a Plasma Wave Instrument and a Magnetometer, and the Solar Wind Electrons Alphas and Protons (SWEAP) investigation, consisting of a Solar Probe Cup (SPC), and a Solar Probe Analyzer (SPAN).	10-Jun-13	30-Sep-26
210	George C. Marshall Space Flight Center (MSFC)	Italian Space Agency (ASI)	Italy (IT)	Memorandum of Understanding (MOU) Between NASA and Italian Space Agency (ASI) Concerning Cooperation the BepiColombo Mission	Project-Specific Agreement (PSA)	Memorandum of Understanding (MOU) between the National Aeronautics and Space Administration of the United States of America and the Italian Space Agency (ASI) Concerning Cooperation the BepiColombo Mission.	20-Jun-13	31-Dec-23
211	Goddard Space Flight Center (GSFC)	European Organization for the Exploitation of Meteorological Satellites (EUMETSAT)	European Org. for the Exploitation of Satellites (EUMETSAT)	Memorandum of Understanding (MOU) Between NASA and the European Organization for the Exploitation of Satellites (EUMETSAT) for Cooperation on the Global Precipitation Measurement (GPM) Mission	Project-Specific Agreement (PSA)	NASA will, for GPM, GCOM-W1, and all other GPM Partners' microwave sensor data, provide access to all Instrument Level 1 data and GPM data in both near real-time and as research products in accordance with GPM Partner data policies; provide access to NASA data products in both near real-time and as research products; and provide access to an algorithm theoretical basis document for the GPM data (including brightness temperature products and precipitation products) that discusses the calibration approach, geolocation, and key aspects of the conversion from instrument counts to brightness temperature. NASA will, for Ground Validation (GV) data provide access to GV data collected by NASA and GPM Partners, subject to GPM Partners' data policies; and for data processing of GPM data, provide read/write tools that can be used to read or write GPM data and NASA data products; provide data browser tools for GPM data and NASA data products; and provide assistance in understanding, interpreting, and using GPM data and NASA data products. EUMETSAT will provide access to EUMETSAT Meteosat Second Generation satellite Spinning Enhanced Visible and Infrared Imager (SEVIRI) and for first generation Metop satellite Microwave Humidity Sounder (MHS) data as quickly as possible from the time of observation, preferably within 24 hours and with as small transmission latency as possible, for the production of standard research quality merged global radiometer products; and provide an algorithm.	26-Jul-13	26-Jul-20
212	Goddard Space Flight Center (GSFC)	University of Valladolid (UVA)	Spain (SP)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and the Universidad de Valladolid of Spain will cooperate on the AERONET program. NASA will provide equipment on loan which the Universidad de Valladolid will host at a mutually agreed location.	12-Sep-13	30-Sep-23

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
213	Goddard Space Flight Center (GSFC)	Canadian Space Agency (CSA)	Canada (CA)	Amendment 1: Implementing Arrangement (IA): Modification to the Implementing Arrangement (IA) Between the NASA and the Canadian Space Agency (CSA) on the Origins, Spectral Interpretation, Resources Identification, and Security-Regolith Explorer (OSIRIS-REx) Mission	Implementing Arrangement/Agreement (IA)	This is an amendment 1 to the original Implementing Arrangement (IA) to add NASA delivery of electronic components to CSA. OSIRIS-REx is a NASA-led asteroid sample return mission currently planned for launch in 2016. It is scheduled to rendezvous with RQ36 in 2019 and the sample return capsule should land on Earth in 2023. CSA is expected to provide the OSIRIS-REx Laser Altimeter (OLA) and members of the science team, with the University of Calgary leading the OLA science team. NASA will transfer to CSA 4% by mass of the returned bulk sample and 4% by surface area of the returned contact pad sample. This is an IA under the Canada Framework Agreement.	25-Sep-13	31-Dec-25
214	Goddard Space Flight Center (GSFC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Memorandum of Understanding (MOU) Between NASA and the Japan Aerospace Exploration Agency (JAXA) for Cooperation on the Astro-H Project	Project-Specific Agreement (PSA)	Memorandum of Understanding (MOU) Between NASA and the Japan Aerospace Exploration Agency (JAXA) on cooperation on the Astro-H mission.	11-Nov-13	8-Oct-20
215	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement (IA) Between NASA and the National Centre for Space Studies (CNES) on the Origins Spectral Interpretation Resource Identification Security-Regolith Explorer (OSIRIS-REX) Mission	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) Between NASA and CNES in cooperation on OSIRIS-REx, a NASA-led asteroid sample return mission currently planned for launch in 2016. It is scheduled to rendezvous with asteroid RQ36 in 2019 and the sample return capsule should land on Earth in 2023. CNES is expected to support Co-Investigators from France to provide important modeling work and lead key astronomical observations of RQ36. This is an IA under the U.S.-France Framework Agreement.	9-Dec-13	31-Dec-25
216	Goddard Space Flight Center (GSFC)	Universidad de Concepcion	Chile (CI)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and the Universidad de Concepcion of Chile will cooperate on the AERONET program. NASA will provide equipment on loan which the Universidad de Concepcion will host at a mutually agreed location.	20-Dec-13	31-Oct-23
217	Headquarters (HQ)	European Space Agency (ESA)	European Space Agency (ESA)	Amendment 1: Letter of Agreement (LOA) for Planetary Protection Cooperation	Project-Specific Agreement (PSA)	Amendment 1: A Letter of Agreement (LOA) between NASA and European Space Agency (ESA) to cooperate in all areas of planetary protection.	23-Dec-13	31-Dec-19
218	Goddard Space Flight Center (GSFC)	Karunya University	India (IN)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and Karunya University (KU) will cooperate on the operation of an AERONET subphotometer station and/or Lidar stations located at KU. NASA provide the equipment, and USM provides the site.	30-Jan-14	30-Jun-24
219	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement btw NASA and CNES on the Seismic Experiment for Interior Structure (SEIS) Instrument for the Interior Exploration Using Seismic Investigations, Geodesy, and Heat Transport (InSight) Mission	Implementing Arrangement/Agreement (IA)	CNES will lead the international consortium providing the SEIS instrument to the InSight mission.	10-Feb-14	30-Jun-19

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
220	Jet Propulsion Laboratory (JPL)	German Research Centre for Geosciences (GFZ)	Germany (GM)	Gravity Recovery and Climate Experiment Follow-on (GRACE-Follow On) Mission	Project-Specific Agreement (PSA)	GRACE-FO is a continuation of the science initiated by the United States-German GRACE mission that was launched in 2002. The primary objective of GRACE-FO is to acquire critical data for tracking water movement on and beneath the Earth's surface and understanding changes in ice sheets and global sea levels. Its data will enhance studies of ocean currents and changes in the structure of solid Earth. GRACE-FO will do this by continuing the extremely high-resolution global data record of the Earth's gravity field and how it changes over time. These gravity fields assist in the study of global climatic issues by improving our understanding, among other things, of surface and deep ocean currents, lithospheric and mantle density variations, aquifer depletion, and polar ice sheet mass variations. As with the GRACE mission, GRACE-FO will acquire the gravity field data using two Earth polar-orbiting spacecraft identically equipped and flying in a loosely controlled tandem formation. As the satellites orbit the Earth, variations in the Earth's gravity field will cause the distance between the two GRACE-FO spacecraft to change. The microwave link between the two GRACE-FO spacecraft will measure these changes at the micron level. These measurements will then be used to determine the Earth's gravity field every month. Launch is planned for August 2017 on a GFZ-provided Launch Vehicle.	10-Feb-14	31-Mar-22
221	Jet Propulsion Laboratory (JPL)	European Space Agency (ESA)	European Space Agency (ESA)	Extension 1: Mars Sample Return (MSR) Study Phase Agreement	Project-Specific Agreement (PSA)	Extension 1: This is an extension of an agreement with European Space Agency (ESA) to study planetary sample return missions and their related technology, with a particular focus on Mars.	10-Apr-14	31-Dec-20
222	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Space Geodesy: Implementing Arrangement (IA) Between NASA and the National Centre for Space Studies (CNES) of France on Space Geodesy Activities and Applications	Implementing Arrangement/Agreement (IA)	Space Geodesy: Implementing Arrangement (IA) Between NASA and CNES, Parties will share data and host each other's instruments. This IA falls under the US-France Framework.	23-Apr-14	31-Dec-24
223	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement (IA) Between NASA and the National Centre for Space Studies (CNES) of France for Cooperation on the Surface Water and Ocean Topography Mission	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) Between NASA and CNES. NASA plans to provide the Payload Module, Ka-band Radar Interferometer (KaRIn), Microwave Radiometer (MR) with its antenna, Laser Retroreflector Array (LRA), Global Positioning System receiver package, launch services, and ground segment elements. The National Centre for Space Studies (CNES) plans to provide the spacecraft bus, KaRIn Radio Frequency Unit (RFU), nadir altimeter, Doppler Orbitography and Radiopositioning Integrated by Satellite (DORIS) receiver package, and ground segment elements.	2-May-14	30-Oct-30
224	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	NASA - European Space Agency (ESA) International Space Life Sciences Working Group (ISLSWG) Agreement on ESA's Straight Ahead in Microgravity Experiment	Implementing Arrangement/Agreement (IA)	NASA and ESA will cooperate on ESA's Straight Ahead in Microgravity Experiment. NASA will provide ESA with access to hardware, and ESA and NASA will exchange data from the experiment.	12-May-14	1-Dec-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
225	Headquarters (HQ)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Agreement Between NASA and the Japan Aerospace Exploration Agency (JAXA) for Cooperation on Areas of Mutual Interest in Air Traffic Management	Project-Specific Agreement (PSA)	NASA and JAXA have identified research topics of mutual interest in air traffic management (ATM). The primary aim of this activity is to advance air transportation automation for benefit of the aviation industry in both nations under the Next Generation Air Transportation System (NextGen) in the United States and the Collaborative Actions for Renovation of Air Traffic Systems (CARATS) in Japan. Both NextGen and CARATS concepts and technologies seek to optimize air transportation operations to reduce delays, fuel consumption, noise, and emissions under both nominal and off-nominal airspace operating conditions. The work performed through this activity is highly synergistic with the work being performed by Airspace Systems Program within NASA's Aeronautics Research Missions Directorate. It is also highly synergistic with work being performed in the Distributed and Revolutionarily Efficient Air-traffic Management System (DREAMS) Project at JAXA. The results of this collaboration will lead to improvements in advanced air transportation automation concepts and technologies, which will be mutually beneficial to the Parties. It is foreseen that the activities carried out under this Agreement will be coordinated with the global approach to IADS undertaken within International Forum for Aviation Research (IFAR). IFAR consists of twenty-four (24) member nations, and NASA and JAXA are the current Chair and Vice-Chair respectively.	21-May-14	31-Dec-19
226	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	Amendment 1: Reimbursable Space Act Agreement Between NASA and the European Space Agency (ESA) for the Development of a Generic Robotics Training Program at the European Astronaut Centre	Project-Specific Agreement (PSA)	Amendment 1 to the Reimbursable Agreement between NASA and ESA for the Development of a Generic Robotics Training Program at the European Astronaut Centre.	28-May-14	31-Dec-20
227	Goddard Space Flight Center (GSFC)	Gobabeb Research and Technical Centre	Namibia (WA)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and the Gobabeb Research and Technical Centre of Namibia will cooperate on the AERONET program. NASA will provide equipment on loan which Gobabeb will host at a mutually agreed location.	26-Jun-14	31-Mar-24
228	Goddard Space Flight Center (GSFC)	University of Blida	Algeria (AG)	Amendment and Extension 1: Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	Amendment and Extension 1: Extension of 2002 AERONET Agreement: NASA provides the AERONET equipment; they provide the location and support of the system. RE: Sun photometer station in Algeria.	3-Jul-14	1-Jun-24
229	Headquarters (HQ)	Ministry of Education and Economic Development of Bermuda	Bermuda (BD)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3-Jul-14	1-Jan-00
230	Glenn Research Center at Lewis Field (GRC)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement (IA) Between NASA and National Centre for Space Studies (CNES) on Cooperation Related to Benchmarking Activities Regarding Cryogenic Propellant Management Capability	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) between NASA and CNES on cooperation related to benchmarking activities regarding cryogenic propellant management capability. The NASA Space Technology Mission Directorate is sponsoring the development of the Cryogenic Propellant Storage and Transfer (CPST) project as a means of demonstrating the capability to safely and efficiently store, transfer and measure cryogenic propellants in space in a manner that minimizes their loss. These technologies are necessary to enable next-generation spacecraft to store the large quantities of fuel required for long duration or deep space missions.	10-Jul-14	1-Oct-19

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
231	Jet Propulsion Laboratory (JPL)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Cooperation on the NASA-Led Interior Exploration Using Seismic Investigations, Geodesy, and Heat Transport (InSight) Mission	Project-Specific Agreement (PSA)	The United Kingdom Space Agency is providing the short-period seismometers, part of the Seismic Experiment for Interior Structure (SEIS) instrument on the NASA InSight mission.	20-Jul-14	30-Jun-19
232	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement (IA) Between NASA and the National Center for Space Studies (CNES) of France on the Scientific Payload of the Solar Orbiter Mission	Project-Specific Agreement (PSA)	Implementing Arrangement (IA) Between NASA and CNES on a Solar Orbiter that is a European Space Agency (ESA) mission carried out in cooperation with NASA that will explore the near-Sun environment to improve the understanding of how the Sun creates the environment of the inner solar system, generates the heliosphere itself, and how fundamental plasma physical processes operate near the sun. ESA is providing the spacecraft bus, integration of the instruments onto the bus, mission operations, and overall science operations. NASA is providing instrumentation and an intermediate class launch vehicle. NASA will lead the provision to ESA of the Solar Orbiter Heliospheric Imager (SoloHI), and the Heavy Ion Sensor (HIS), which will be integrated onto the spacecraft as part of the Solar Wind Analyzer (SWA) instrument suite led by the United Kingdom. Solar Orbiter is expected to launch on an Atlas 5 in July 2017. This is an IA under the U.S.-France Framework Agreement.	7-Aug-14	31-Dec-25
233	Johnson Space Center (JSC)	Institut de Physique du Globe de Paris	France (FR)	International Lunar Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Marc Chaussidon of Institut de Physique du Globe de Paris in Paris, France proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	13-Aug-14	13-Aug-19
234	Johnson Space Center (JSC)	Institut de Physique du Globe de Paris	France (FR)	International Lunar Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Fredric Moynier of Institut de Physique du Globe de Paris in Paris, France proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	13-Aug-14	13-Aug-19
235	Johnson Space Center (JSC)	Ecole Normale Superieure de Lyon	France (FR)	International Lunar Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Bernard Bourbon of The Ecole Normale Superieure in Lyon, France proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	13-Aug-14	31-Oct-19
236	Johnson Space Center (JSC)	Institut de Planetologie et d'Astrophysique de Grenoble	France (FR)	International Lunar Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Francois-Regis Orthous-Daunay of the Institut de Planetologie et d'Astrophysique de Grenoble in Grenoble, France proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	13-Aug-14	31-Oct-19

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
237	Headquarters (HQ)	Belgian Centre Spatiale de Liege (CSL),Beligan Federal Science Policy Office (BELSPO)	Belgium (BE)	NASA-Belgium Letter Agreement on the Ionospheric Connection Explorer (ICON) Mission	Project-Specific Agreement (PSA)	NASA's Science Mission Directorate is sponsoring the development of the ICON mission, a project in the Heliophysics Explorers program. The ICON mission will explore the near-Earth space environment to discover the sources of the region's remarkable variability. ICON will make a complete set of measurements needed to describe the fundamental coupling process occurring in the ionosphere, Earth's natural plasma laboratory. ICON's observations at the edge of space will provide the key physical insights needed to predict conditions in near-Earth space, and enhance understanding of the connection between Earth's weather and space weather. ICON will carry four instruments to achieve its science goals: the dual Michelson Interferometers for Global High-resolution Thermospheric Imaging (MIGHTI), a Far Ultra Violet (FUV) spectrographic imager, an Extreme Ultra Violet (EUV) spectrographic imager, and an Ion Velocity Meter (IVM). This agreement covers the Belgian contributions to ICON, specifically the alignment, testing, calibration, and evaluation of FUV.	27-Aug-14	30-Jun-22
238	Ames Research Center (ARC)	University of Stuttgart	Germany (GM)	Extension 1: Cooperation in Measuring and Characterizing Heat Flux of High-Powered Plasma Arcjets	Project-Specific Agreement (PSA)	Extension 1: This is an extension of the Agreement concerning Joint experiments in which jet plasma diagnostic instrumentation from the University of Stuttgart is applied to the high-power plasma arc jets at ARC. Also, evaluation of current state of NASA's diagnostic tools and procedures regarding the analysis of the plasma arc jet. Original: Joint experiments in which jet plasma diagnostic instrumentation from the University of Stuttgart is applied to the high-power plasma arc jets at ARC. Also, evaluation of current state of NASA's diagnostic tools and procedures regarding the analysis of the plasma arc jet.	11-Sep-14	31-Aug-19
239	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement (IA) Between NASA and the National Centre for Space Studies (CNES) of France on the Scientific Payload of the Tool for the Analysis of Radiation from Lightning and Sprites (TARANIS) Mission	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) between NASA and CNES. TARANIS is a CNES mission in which a microsatellite will undertake observations of spectacular transient luminous events (TLEs) in Earth's upper atmosphere. The TARANIS mission was designed to detect and study different phenomena associated with atmospheric storms using a microsatellite placed in a quasi-polar orbit. TARANIS includes contributions from the United States, Poland, and the Czech Republic, and has a launch target of 2016-17. NASA will provide a prototype electronics board and design for a Langmuir probe as part of the low frequency electric field experiment, and the flight sensor. CNES will build the flight electronics and incorporate them into their electric field experiment on TARANIS, in addition to accommodating the Langmuir probe sensor on the TARANIS instrument arm.	30-Sep-14	31-Dec-21

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
240	Jet Propulsion Laboratory (JPL)	Indian Space Research Organization (ISRO)	India (IN)	Implementing Arrangement (IA): NASA-Indian Space Research Organization (ISRO) Synthetic Aperture Radar (NISAR) Implementing Arrangement	Implementing Arrangement/Agreement (IA)	This Implementing Arrangement (IA) for the NASA-ISRO Synthetic Aperture Radar (NISAR) mission is concluded under and subject to the Framework Agreement between the National Aeronautics and Space Administration and the Indian Space Research Organisation for Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes, signed on February 1, 2008. In this cooperative activity, NASA will provide: the L-band Synthetic Aperture Radar (SAR) instrument, including a reflector/boom assembly; a high rate telecommunication subsystem for science data; GPS receivers; a solid state recorder; and a payload data subsystem. ISRO will provide: the S-band SAR; the spacecraft bus; and the launch vehicle and associated launch services. NASA will download all science data to U.S. ground stations and ISRO will download selected science data and telemetry data to ISRO's ground station. The NISAR mission will make global measurements of the causes and consequences of land surface changes. Potential areas of research include ecosystem disturbances, ice sheet collapse and natural hazards. The NISAR mission is optimized to measure subtle changes of the Earth's surface associated with motions of the crust and ice surfaces.	30-Sep-14	30-Sep-34
241	Johnson Space Center (JSC)	Curtin University of Technology	Australia (AS)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Prof. Phil Bland of Curtin University in Perth, Western Australia, Australia proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
242	Johnson Space Center (JSC)	Curtin University of Technology	Australia (AS)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Alexander Nemchin of Curtin University in Perth, Western Australia, Australia proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
243	Johnson Space Center (JSC)	Australian National University (ANU)	Australia (AS)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Oliver Nebel of The Australian National University in Canberra, Australia proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
244	Johnson Space Center (JSC)	Natural History Museum of Denmark	Denmark (DA)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Martin Bizzarro of the Natural History Museum of Denmark in Denmark proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
245	Johnson Space Center (JSC)	University of Copenhagen	Denmark (DA)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Nikolaos Tsapatsaris of University of Copenhagen in Copenhagen, Denmark proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
246	Johnson Space Center (JSC)	CEREGE	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	P. Rochette of CEREGE in Aix en Provence, France proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
247	Johnson Space Center (JSC)	Centre de Recherches Petrographiques et Geochimiques	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Beatrice Luais of CRPG-CNRS Nancy in Nancy, France proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
248	Johnson Space Center (JSC)	University Pierre and Marie Curie (UPMC)	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Albert Jambon of UPMC-University Paris in Paris, France, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
249	Johnson Space Center (JSC)	Institute of Earth Sciences, University Heidelberg	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Prof. Mario Trieloff of the Institute of Earth Sciences, University of Heidelberg in Heidelberg, Germany proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
250	Johnson Space Center (JSC)	Institut fur Geologie und Mineralogie, Universitat zu Koln	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Frank Wombacher of Institut fur Geologie und Mineralogie, Universitat zu Koln in Germany proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
251	Johnson Space Center (JSC)	Institut fur Geologie und Mineralogie	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Prof. Carsten Munker of the Institut fur Geologie und Mineralogie in Cologne, Germany proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
252	Johnson Space Center (JSC)	PLANEX, Physical Research Laboratory	India (IN)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Vinai K. Rai of Planetary Sciences and Exploration Program (PLANEX), Physical Research Laboratory in Ahmedabad, India proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
253	Johnson Space Center (JSC)	Physical Research Laboratory (PRL)	India (IN)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Jitendra Nath Goswami of the Physical Research Laboratory in Ahmedabad, India proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
254	Johnson Space Center (JSC)	Dipartimento di Fisica e Scienze della Terra	Italy (IT)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Mario Tribaudino of Dipartimento di Fisica e Scienze della Terra in Parma, Italy proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
255	Johnson Space Center (JSC)	Tokyo Institute of Technology (Tokyo Tech)	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Tomohiro Usui of Tokyo Institute of Technology in Tokyo, Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
256	Johnson Space Center (JSC)	JAMSTEC Kochi Institute for Core Sample Research	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Motoo Ito of JAMSTEC Kochi Institute for Core Sample Research in Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
257	Johnson Space Center (JSC)	Osaka University	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Hikaru Yabuta of Osaka University in Osaka, Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
258	Johnson Space Center (JSC)	Tohoku University	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Kaori Jogo of Tohoku University in Sendai, Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
259	Johnson Space Center (JSC)	Tohoku University	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Daisuke Nakashima of Tohoku University in Sendai, Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
260	Johnson Space Center (JSC)	The University of Auckland	New Zealand (NZ)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Joel Baker of The University of Auckland in Auckland, New Zealand proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
261	Johnson Space Center (JSC)	The University of Cape Town	South Africa (SF)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Patricia Doyle of the University of Cape Town in Cape Town, South Africa proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
262	Johnson Space Center (JSC)	National Research Council (CSIC)	Spain (SP)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Ph.D. Josep M. Trigo-Rodriguez of Institute of Space Sciences (CSIC-IEEC) in Bellaterra, Barcelona, Spain proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
263	Johnson Space Center (JSC)	Institute of Earth Sciences	Taiwan (TW)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Der-Chung Lee of the Institute of Earth Sciences in Taipei, Taiwan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
264	Johnson Space Center (JSC)	The Open University	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Ian Wright of Department of Physical Sciences, Open University in the United Kingdom proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
265	Johnson Space Center (JSC)	The Open University	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Richard Greenwood of The Open University in Milton Keynes, UK proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
266	Johnson Space Center (JSC)	The University of Oxford	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Alex Halliday of The University of Oxford in Oxford, United Kingdom proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
267	Johnson Space Center (JSC)	University College London	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Dominic Papineau of the Univ. College London in London, UK proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6-Oct-14	6-Oct-19
268	Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement between NASA and DLR for Cooperation on the Interior Exploration Using Seismic Investigations, Geodesy, and Heat Transport (InSight) Mission	Implementing Arrangement/Agreement (IA)	DLR is providing the Heat Flow and Physical Properties Package (HP3) instrument for the NASA InSight mission, slated for launch in 2016.	4-Nov-14	30-Jun-19

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
269	Ames Research Center (ARC)	Korea Agency for Infrastructure Technology Advancement (KAIA)	Korea, Republic of (KS)	Memorandum of Understanding (MOU) Between NASA and the Korea Agency for Infrastructure Technology Advancement Concerning the Cooperation in Areas of Mutual Interest in Air Traffic Management	Project-Specific Agreement (PSA)	Memorandum of Understanding (MOU): The purpose of this activity is to advance air transportation automation for the benefit of the aviation industry in both nations under the Next Generation Air Transportation System (NextGen) in the United States and the National ATM Reformation and Enhancement (NARAE) in the Republic of Korea. Both NextGen and NARAE concepts and technologies seek to optimize air transportation operations to reduce delays, fuel consumption, noise, and emissions under both nominal and off-nominal airspace operating conditions. The work performed through this activity is highly synergistic with the work being performed by the Airspace Systems Program within NASA's Aeronautics Research Mission Directorate. It is also highly synergistic with work being performed by KAIA and its partners, which include but are not limited to officials from the Korea Aerospace Research Institute, Incheon International Airport, Gimpo Airport, Korean Airlines, Asiana Airlines, and Ministry of Land Infrastructure, and Transport.	17-Nov-14	31-Dec-19
270	Headquarters (HQ)	Rovio Entertainment LTD	Finland (FI)	Extension 1: Non-Reimbursable Space Act Agreement Between NASA and Rovio Entertainment, Ltd. of Finland for Cooperation in the Development of Civil Space Content for the "Angry Birds" Game	Project-Specific Agreement (PSA)	Extension 1: Extension of the Agreement between NASA and Rovio Entertainment, Ltd., for an additional six years, for cooperation in the development of civil space content for the "Angry Birds" game that entered into force on January 13, 2012. NASA will offer use of media items and archives - photos, film, and more. NASA will assist Rovio in producing a new, revised version of the "Angry Birds" video game in order to ensure reasonable depictions and references to NASA civil space missions in the game and to increase public understanding of NASA's programs and missions.	17-Nov-14	12-Jan-21
271	Headquarters (HQ)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Hayabusa2 and OSIRIS-REx Memorandum of Understanding (MOU)	Project-Specific Agreement (PSA)	Hayabusa2 is a JAXA mission, on which NASA is collaborating, which builds on lessons learned from JAXA's initial Hayabusa mission that collected samples from a small asteroid named Itokawa and returned them to Earth in June 2010. Hayabusa-2's target is a 1 kilometer-wide asteroid named 1999 JU3, a C-type asteroid which is thought to contain more organic material than other asteroids. Scientists hope to better understand how the solar system evolved by studying samples from these asteroids. NASA and JAXA are cooperating on the mission science and NASA will receive a portion of the Hayabusa2 sample in exchange for providing Deep Space Network communications and navigation support for the mission. In addition, JAXA and NASA will collaborate on the science of NASA's Origins, Spectral Interpretation, Resource Identification, Security - Regolith Explorer (OSIRIS-REx) mission to mutually maximize their missions' results. OSIRIS-REx, the first U.S. asteroid sample return mission, is scheduled to launch in 2016. OSIRIS-REx will rendezvous with the 500-meter-long asteroid Bennu in 2019 for detailed reconnaissance and a return of samples to Earth in 2023.	17-Nov-14	17-Nov-25

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
272	Goddard Space Flight Center (GSFC)	Hokkaido University (HokuDai)	Japan (JA)	Ocean Color Research and Lidar Field Work	Project-Specific Agreement (PSA)	NASA and Hokkaido University will collaborate on field campaigns and incorporate data into the SeaWiFS Bio-Optical Archive and Storage System (SeaBASS) archive. NASA will provide equipment (radiometers, for example) to make in situ measurements on Japanese campaigns. Hokkaido University will allow for visiting researchers and provide necessary support on Japanese campaigns.	28-Nov-14	28-Nov-19
273	Johnson Space Center (JSC)	The University of Oxford	United Kingdom (UK)	International Lunar Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Kerri Donaldson-Hanna of the Oxford University, UK, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	11-Dec-14	31-Oct-19
274	Goddard Space Flight Center (GSFC)	European Space Agency (ESA)	European Space Agency (ESA)	Amendment: Hubble Space Telescope (HST)/2.4-Meter Space Telescope (ST)	Project-Specific Agreement (PSA)	Amendment to continue the cooperation between NASA and European Space Agency (ESA) on the Hubble Space Telescope (HST). Provision of a space observatory for use by the international astronomy community to extend the sensitivity, resolving power, and spectral range of astronomical observations decisively beyond those achievable from Earth observatories. Extends the Memorandum of Understanding (MOU) to Dec 31, 2019.	23-Dec-14	31-Dec-19
275	Johnson Space Center (JSC)	Universite Blaise Pascal	France (FR)	International Lunar Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Maud Boyet of the Universite Blaise Pascal in Clermont-Ferrand, France proposes to use these Lunar samples to undertake scientific investigations led by its Principal Investigator.	29-Dec-14	31-Oct-19
276	Johnson Space Center (JSC)	Universitat zu Koln	Germany (GM)	International Lunar Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Carsten Munker of the Universitat zu Koln in Koln, Germany proposes to use these Lunar samples to undertake scientific investigations led by its PI.	7-Jan-15	31-Oct-19
277	Johnson Space Center (JSC)	Vrije University Brussels (VUB)	Belgium (BE)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Stepan M. Chernonozhkin of Vrije Universiteit Brussel in Pleinlaan 2, 1050 Brussels, Belgium proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	23-Jan-15	23-Jan-20
278	Johnson Space Center (JSC)	Institut de Physique du Globe de Paris	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Frederic Moynier of The Institut de Physique du Globe de Paris in Paris, France proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	23-Jan-15	23-Jan-20
279	Johnson Space Center (JSC)	Institut fur Planetologie	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Marian Horstmann of the Institut fur Planetologie, WWU Munster in Munster, Germany proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	23-Jan-15	23-Jan-20
280	Johnson Space Center (JSC)	Institute of Geosciences, University of Jena	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Prof. Dr. Falko Langenhorst of the Institute of Geosciences, University of Jena, Germany proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	23-Jan-15	23-Jan-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
281	Johnson Space Center (JSC)	Institut fur Geologie und Mineralogie, Universitat zu Koln	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Frank Wombacher of the Institut fur Geologie und Mineralogie, Universitat zu Koln proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	23-Jan-15	23-Jan-20
282	Johnson Space Center (JSC)	Japan Space Forum	Japan (JA)	International Lunar Sample Loan Agreement: Reimbursable Space Act Agreement between NASA and Japan Space Forum for Two Lunar Sample Display Cases	Project-Specific Agreement (PSA)	NASA/JSF agree to the construction and reimbursement of two specially assembled lunar sample display cases that will each house one Apollo lunar sample. The samples to be displayed in the cases are Apollo lunar sample numbers 15499,177 and 60025,767 (hereinafter referred to as the lunar samples), which were brought to Earth by the Apollo 15 and 16 astronauts, respectively. These lunar samples will be loaned to JSF for long-term display inside the lunar sample display cases as part of museum exhibit, as documented in the cooperative Lunar Sample Display Agreement concluded by JSC and JSF on August 13, 2014	23-Jan-15	23-Jan-20
283	Johnson Space Center (JSC)	Tokyo Metropolitan University	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Naoki Shirai of the Tokyo Metropolitan University in 1-1 Minamiosawa, Hachioji, Tokyo, Japan proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	23-Jan-15	23-Jan-20
284	Johnson Space Center (JSC)	Institute of Geological Sciences, Polish Academy of Sciences	Poland (PL)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Anna Losiak of the Inst. of Geological Sciences, Polish Academy of Sciences, in Wroclaw, Poland proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	23-Jan-15	23-Jan-20
285	Johnson Space Center (JSC)	University of the Basque Country (UPV/EHU)	Spain (SP)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Juan Manuel Madariaga of the University of the Basque Country (UPV/EHU) in Leioa, Spain proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	23-Jan-15	23-Jan-20
286	Johnson Space Center (JSC)	ETH Zurich	Switzerland (SZ)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Waheed Akram of ETH Zurich in Switzerland proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	23-Jan-15	23-Jan-20
287	Johnson Space Center (JSC)	University of Bern	Switzerland (SZ)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Prof. I. Leya of the University of Bern in Switzerland proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	23-Jan-15	23-Jan-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
288	Johnson Space Center (JSC)	University of Glascow	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Lydia Hallis of The University of Glasgow in Scotland, UK proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	23-Jan-15	23-Jan-20
289	Johnson Space Center (JSC)	Natural History Museum	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Sara Russell of the Natural History Museum in London, UK proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	23-Jan-15	23-Jan-20
290	Goddard Space Flight Center (GSFC)	National Commission on Space Activities (CONAE)	Argentina (AR)	Implementing Arrangement (IA) Between NASA and the National Commission on Space Activities (CONAE) of the Argentine Republic for Cooperation in Solar and Space Physics (Heliophysics) and Space Weather Research	Implementing Arrangement/Agreement (IA)	This is a data-sharing agreement under which Argentina will provide data downlink for the NASA Van Allen Probes mission, which helps scientists understand the Sun's influence on Earth and near-Earth space by studying the Earth's radiation belts on various scales of space and time. The Van Allen Probes mission is part of NASA's Living with a Star program. Data sharing for this mission will increase scientific output and productivity to the benefit of heliophysics overall. This is an IA under the Framework Agreement between the Government of the United States of America and the Government of the Argentine Republic on Cooperation in the Peaceful Uses of Outer Space, signed on October 2011 (the U.S.-Argentina Framework Agreement).	19-Feb-15	31-Dec-23
291	Johnson Space Center (JSC)	The University Court of The University of Edinburgh	United Kingdom (UK)	Reimbursable Space Act Umbrella Agreement Between NASA and The University of Edinburgh Regarding Anthropomorphic Robotic Systems	Umbrella/Framework Agreement (UM/FW)	JSC is leading an agency-wide effort to advance the state of the art of autonomous robot manipulation and mobility operations. JSC's goal is to develop anthropomorphic robotic "caretaker" systems for deep space missions which can provide autonomous tending of spacecraft in absence of crew, reduction of crew time for spacecraft maintenance chores, and response capability for spaceflight emergencies. These efforts led to anthropomorphic robotic demonstration systems culminating with the R5 system. Meanwhile, the UoE which is engaged in research and training related to the interactions between robots and their environments, is leading a national UK initiative on robotics research, and has expressed an interest in advancing their efforts through the reimbursable use of an advanced robotic test bed based on the R5 technology. Thus, this Umbrella Agreement shall establish the parameters for the support NASA will provide to the UoE related to the advancement and loan of NASA robotic technologies. Annex 1's purpose is for NASA and the UoE to undertake design, delivery, and testing of anthropomorphic robotic systems that address key challenges for managing interactions between robots and their environments, between multiple autonomous systems, and between robots and humans. NASA will further develop the NASA R5B test bed to meet the UoE's requirements.	26-Feb-15	26-Feb-26
292	Goddard Space Flight Center (GSFC),Jet Propulsion Laboratory (JPL)	Chinese Academy of Sciences (CAS)	China, People's Republic of (CH)	Amendment and Extension 2: Space Geodesy	Project-Specific Agreement (PSA)	Amendment and Extension 2: Cooperation on Space Geodesy for the solution on important scientific problems in geophysics.	13-Mar-15	15-Mar-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
293	Jet Propulsion Laboratory (JPL)	Japan Aerospace Exploration Agency (JAXA),Ministry of Environment (MOE),National Institute for Environmental Studies (NIES)	Japan (JA)	Memorandum of Understanding (MOU) for Cooperation on OCO-2 and the Greenhouse Gases Observing Satellite (GOSAT) and GOSAT-2	Project-Specific Agreement (PSA)	Memorandum of Understanding (MOU): The GOSAT, OCO-2, and GOSAT-2 missions ("3 CO2 Missions") are elements of the Global Earth Observation System of Systems, and their measurements are expected to improve the understanding of the processes that regulate atmospheric carbon dioxide, enabling more reliable forecasts of carbon dioxide buildup and its impacts on climate change. GOSAT and GOSAT-2 contribute to Japan's implementation of the United Nations Framework Convention on Climate Change - (calibration, validation).	17-Mar-15	20-Nov-24
294	Johnson Space Center (JSC)	Museum fur Naturkunde, Berlin	Germany (GM)	International Lunar Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Vera Fernandes of the Museum fur Naturkunde, Berlin in Berlin, Germany proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	31-Mar-15	31-Oct-19
295	Johnson Space Center (JSC)	University of Manchester	United Kingdom (UK)	International Genesis Sample Loan Agreement	Project-Specific Agreement (PSA)	Jamie D. Gilmour of The University of Manchester in Manchester, United Kingdom proposes to use the Genesis samples to undertake scientific investigations (described in one or more sample requests submitted by the PI to the Genesis Sample Curator at JSC and approved by the Genesis Sample Curator).	31-Mar-15	31-Mar-20
296	Johnson Space Center (JSC)	Canadian Space Agency (CSA)	Canada (CA)	Reimbursable Space Act Agreement Between NASA and the Canadian Space Agency (CSA) for Conditioned Stowage and Utilization Hardware Services for the International Space Station	Project-Specific Agreement (PSA)	A delegated agreement signed by the ISS Program Manager for NASA to provide CSA with conditioned transportation to and from the ISS and stowage services on-board the ISS in support of its utilization activities and with specific hardware and services needed to assist CSA with the utilization of the ISS.	7-Apr-15	31-Dec-20
297	Headquarters (HQ)	European Space Agency (ESA)	European Space Agency (ESA)	Europa Feasibility Study Agreement	Project-Specific Agreement (PSA)	Europa Clipper is a concept under study by NASA that would conduct detailed reconnaissance of Jupiter's moon, Europa, and would investigate whether the icy moon could harbor conditions suitable for life. The mission would perform a detailed investigation of Europa using a highly capable, radiation-tolerant spacecraft that would perform repeated close flybys of the icy moon from a long, looping orbit around Jupiter.	28-Apr-15	28-Apr-20
298	Goddard Space Flight Center (GSFC)	Norwegian Space Centre (NSC)	Norway (NO)	Implementing Arrangement (IA) Between NASA and the Norwegian Space Center (NSC) on the Interface Region Imaging Spectrograph (IRIS) Mission	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA): NASA and NSC will collaborate on IRIS observations, which will be collected through several ground stations around the globe, including one located at the Kongsberg Satellite Services - Norwegian Space Centre (KSAT-NSC) station in Svalbard, Norway. NASA and NSC use a solar telescope and spectrograph to explore the solar chromospheres. The collaboration includes analysis of the IRIS observations using 3-D numerical models from the Institute of Theoretical Astrophysics (ITA) at the University of Oslo, Norway. The ground station support from KSAT-NSC in Svalbard will be provided through December 31, 2016, following the launch of IRIS. The ground station will support an adequate number of downlink and uplink passes to support operations and an average data rate on the order of 50 gigabytes (Gbytes) per day.	8-May-15	10-Jan-21
299	Goddard Space Flight Center (GSFC)	United Nations World Meteorological Organization (WMO)	United Nations World Meteorological Organization (WMO)	Letter of Arrangement (LOA): Cooperation in the Micro-Pulse Lidar Network (MPLNET) as a Contributing Network	Project-Specific Agreement (PSA)	Letter of Arrangement (LOA) between NASA and the World Meteorological Organization Global atmosphere Watch Program (WMO/GAW) related to the recognition of the Micro-pulse Lidar Network (MPLNET) as a contributing network. Signed May 11, 2015, with no expiration date stated.	11-May-15	11-May-00

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
300	Johnson Space Center (JSC)	University of Bern	Switzerland (SZ)	International Lunar Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Hauke Vollstaedt proposes to use these Lunar samples to undertake scientific investigations led by its PI given to the Apollo Sample Curator at JSC and approved by the Apollo Sample Curator.	14-May-15	31-Oct-19
301	Glenn Research Center at Lewis Field (GRC)	National Research Council Canada (NRCC)	Canada (CA)	Amendment 1: Agreement Between NASA and the National Research Council of Canada (NRCC) Concerning Cooperation in Icing Protection Systems Research	Project-Specific Agreement (PSA)	NASA and NRCC enjoyed a mutually beneficial cooperation in the area of icing research to improve aviation safety by addressing airplane engine power loss events associated with the high-altitude convective weather and thermal ice protection systems. The original agreement entered into force on December 2, 2009, and expired on November 30, 2014. During the time period of the original agreement, NASA and NRCC cooperated in a High Ice Water Content (HIWC) Field Campaign and conducted joint research to improve the measurement capabilities of high ice water content and mixed phase (liquid and ice) environments. This effort resulted in the development of Iso-Kinetic Probes (IKP) used for ground-based and flight-based measurements and modifications made to existing atmospheric instruments. Therefore, NASA proposed a new extension to allow for a comparison test to be conducted with data taken from the flight IKP, and new icing capabilities have been added to the Propulsion Systems Laboratory (PSL) at NASA.	3-Jun-15	21-May-20
302	Ames Research Center (ARC)	Catholic University of the North (UCN)	Chile (CI)	Amendment 4: Astrobiology Field Investigations in the Atacama and Altiplano Regions of Northern Chile	Project-Specific Agreement (PSA)	Amendment 4: Cooperation on astrobiology field campaigns in the Atacama Desert and Altiplan Region of Chile in collaboration with the Catholic University of the North.	8-Jun-15	30-Sep-20
303	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement (IA) Between NASA and National Centre for Space Studies (CNES) for Cooperation in Orbital Debris Conjunction Assessment & Risk Analysis	Implementing Arrangement/Agreement (IA)	Mission Directorate: SMD. The purpose of this IA is to set forth the responsibilities of the Implementing Agencies for orbital debris conjunction assessment and risk analysis in order to provide improved mitigation options to satellite operators facing in-orbit collision threats.	16-Jun-15	15-Jun-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
304	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement (IA) Between NASA and the Centre National D'Etudes Spatiales (CNES) of France on the SuperCam Instrument for the Mars 2020 Mission	Implementing Arrangement/Agreement (IA)	Mars 2020 is the next strategic mission in NASA's Mars Exploration Program. The mission will land a rover on the planet to conduct a wide range of scientific exploration, consistent with NASA's science goals for the Mars Exploration Program. Mars 2020's objective is to explore for signs of ancient life and habitable environments, study Martian weather and atmosphere, and study Martian geology. NASA plans to launch the mission in July 2020, and land on Mars in February 2021. NASA expects that the rover will conduct operations until at least August 2023. One of the seven scientific and exploration instruments on the Mars 2020 payload includes the SuperCam: Active and Reflectance Mineralogy, Astrobiology, Chemistry, and Imaging at Remote Distances instrument suite. NASA selected Dr. Roger Wiens of the Los Alamos National Laboratory (LANL) as the SuperCam Principal Investigator (PI). Dr. Sylvestre Maurice of the Institut de Recherche en Astrophysique et Planetologie (IRAP/CNRS) is the Deputy Principal Investigator and the science and technical lead of the French contribution to SuperCam. The French team will develop the SuperCam Mast Unit and the American team will develop the SuperCam Body Unit. This Implementing Arrangement will be concluded pursuant to the Framework Agreement between the Government of the French Republic and the Government of the United States of America for Cooperative Activities in the Exploration and Use of Outer Space for Peaceful Purposes.	16-Jun-15	30-Jun-24
305	Jet Propulsion Laboratory (JPL)	National Institute for Aerospace Technology (INTA),The Spanish Centro para el Desarrollo Technologico Industrial (CDTI)	Spain (SP)	Amendment: Implementation Agreement (IA) Between NASA, Center for the Development of Industrial Technology (CDTI), and National Institute of Aerospace Technology (INTA) Concerning Cooperation on the Mars Science Laboratory (MSL) Mission	Implementing Arrangement/Agreement (IA)	Amendment: Implementation Agreement (IA): In addition to extending the Mars Science Laboratory (MSL) cooperation, this amendment adds the Spanish provision of the High Gain Antenna (HGA) to the Mars 2020 mission and the Temperature and Wind on InSight (TWINS) sensors on the Interior Exploration using Seismic Investigations, Geodesy, and Heat Transport (InSight) mission.	16-Jun-15	31-Dec-25
306	Johnson Space Center (JSC)	ETH Zurich	Switzerland (SZ)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Alison Hunt of ETH Zurich, Institute for Geochemistry and Petrology in Zurich, Switzerland, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	23-Jun-15	23-Jun-20
307	Johnson Space Center (JSC)	Scottish Universities Environmental Research Centre	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Benjamin Eric Cohen of Scottish Universities Environmental Research Centre in UK, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	23-Jun-15	23-Jun-20
308	Johnson Space Center (JSC)	University of Manchester	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Ray Burgess of the University of Manchester in UK, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	23-Jun-15	23-Jun-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
309	Johnson Space Center (JSC)	University of Manchester	United Kingdom (UK)	International Genesis Sample Loan Agreement	Project-Specific Agreement (PSA)	Ian Lyon of The University of Manchester in Manchester, UK, proposes to use the Genesis samples to undertake scientific investigations (described in one or more sample requests submitted by the PI to the Genesis Sample Curator at JSC and approved by the Genesis Sample Curator).	23-Jun-15	23-Jun-20
310	Glenn Research Center at Lewis Field (GRC),Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	Implementing Arrangement (IA) Between NASA and the European Space Agency (ESA) Concerning NASA's Provision of a Short Duration Flight Opportunity in Exchange for Goods and Services related to the Orion Multi-Purpose Crew Vehicle Service Module	Implementing Arrangement/Agreement (IA)	Barter exchanging short duration increment opportunity on the ISS (Launch 44S, Return 42S) for hardware towards Service Module 2 (or spares for SM 1).	25-Jun-15	31-Dec-21
311	Headquarters (HQ)	Brazilian Space Agency (AEB)	Brazil (BR)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE Program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	30-Jun-15	30-Jun-20
312	Goddard Space Flight Center (GSFC)	Korea Astronomy and Space Science Institute (KASI)	Korea, Republic of (KS)	Space Geodesy: Korea Astronomy and Space Science Institute (KASI)	Project-Specific Agreement (PSA)	Collaboration in the field of the space geodesy, including the development of space geodetic techniques, data sharing from a local and global geodetic observing network, and application research on crustal motion, terrestrial reference frame (TRF), Celestial Reference Frame (CRF), Earth rotation/polar motion and the interactions of the Earth systems, as well as natural hazards prediction/reduction. The agreement will also jointly strengthen the global geodetic infrastructure, improve research and development, and facilitate exchange and discussion of challenging geodetic issues.	30-Jun-15	30-Jun-20
313	Headquarters (HQ)	Korea Astronomy and Space Science Institute (KASI)	Korea, Republic of (KS)	Korea Astronomy and Space Science Institute (KASI) - Helio Agreement	Project-Specific Agreement (PSA)	Cooperation in solar and space physics (heliophysics) and space weather research, including sharing the data of new NASA missions, in particular the Solar Dynamics Observatory (SDO), Radiation Belt Storm Probe (RBSP), and Magnetospheric MultiScale (MMS) missions, to increase their scientific output and productivity to the benefit of heliophysics overall. KASI will build a data center and provide access for scientists, provide the necessary ground assets to acquire and process the space weather broadcast data from RBSP, provide measures to safeguard the RBSP space weather broadcast mode operating frequencies, and exchange scientific and technical personnel from KASI.	30-Jun-15	30-Jun-20
314	Headquarters (HQ)	Brazilian Space Agency (AEB)	Brazil (BR)	Implementing Arrangement (IA) for Cooperation Between NASA and the Brazilian Space Agency (AEB) of the Federative Republic of Brazil of Brazil in Heliophysics and Space Weather Research	Implementing Arrangement/Agreement (IA)	NASA and the Brazilian Space Agency (AEB) signed an IA under the U.S.-Brazil Framework Agreement on Cooperation in the Peaceful Uses of Outer Space that will facilitate enhanced cooperation in the fields of solar and space physics (heliophysics) and space weather research. Under the IA, AEB, through the Brazilian National Institute for Space Research (INPE), will acquire and process space weather broadcast data from NASA's Van Allen Probes mission, which was launched in 2012. The IA also enables Brazilian participation in the research working groups of NASA heliophysics missions, including the Van Allen Probes mission and the Magnetospheric MultiScale mission, and promotes continued discussion on new projects for potential U.S.-Brazil collaboration in heliophysics and space weather research.	30-Jun-15	30-Jun-25

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
315	Johnson Space Center (JSC)	Canadian Space Agency (CSA)	Canada (CA)	NASA-Canadian Space Agency (CSA) High Resolution Peripheral Quantitative Computed Tomography (HR-pQCT) International Space Life Sciences Working Group (ISLSWG) Agreement	Implementing Arrangement/Agreement (IA)	NASA and Canadian Space Agency (CSA) have agreed to cooperate on CSA's baseline data collection for their TBone experiment, which will require the installation of the High Resolution Peripheral Quantitative Computed Tomography (HR-qQCT) at the NASA Johnson Space Center.	9-Jul-15	31-Dec-20
316	Jet Propulsion Laboratory (JPL)	Government of Spain,National Institute for Aerospace Technology (INTA)	Spain (SP)	Amendment 2: Scientific Cooperation Agreement Between the United States of America and the Kingdom of Spain for the NASA Tracking Station	Project-Specific Agreement (PSA)	Amendment 2: This is a continuation of cooperation in the utilization of a ground station in Spain for transmission and reception of radio-electric signals in support of space probes, spacecraft, and space science for peaceful ends. Dip notes were required to enter the agreement into force, and these came into force in November 2003. Full agreement (English & Spanish versions, plus both dip notes) now attached.	4-Sep-15	17-Nov-24
317	Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Italy (IT)	Earth Observation Research Related to Environmental Monitoring and Hazard/Disaster Management (COSMO-SkyMed)	Project-Specific Agreement (PSA)	Cooperative research using the Italian Space Agency (ASI) COSMO-SkyMed data. May involve downlink at the Alaska Satellite Facility and access to NASA postdoc programs.	9-Sep-15	31-Oct-20
318	Goddard Space Flight Center (GSFC)	All Nations University College in Koforidua (ANUC) of Ghana	Ghana (GH)	Cooperation in the Aerosol Robotic Network (AERONET) with All Nations University College in Koforidua, Ghana	Project-Specific Agreement (PSA)	Cooperative research on aerosols using sun photometers integrated into a global network.	17-Sep-15	16-Sep-25
319	Langley Research Center (LaRC)	University of Innsbruck	Austria (AU)	North Atlantic Aerosols and Marine Ecosystem Study (NAAMES)	Project-Specific Agreement (PSA)	This agreement is for a scientific airborne campaign that will study the annual life cycle of phytoplankton in the North Atlantic Ocean and the impact of small airborne particles derived from marine organisms on climate. Further, the agreement will allow Dr. Armin Wisthaler and his Proton-Transfer-Reaction Mass Spectrometry (PTRMS) instrument to fly on the NASA C-130 aircraft for the NAAMES study.	24-Sep-15	15-Jan-20
320	Jet Propulsion Laboratory (JPL)	Indian Space Research Organization (ISRO)	India (IN)	AVIRIS-NG Airborne Campaign	Implementing Arrangement/Agreement (IA)	This agreement is for a scientific airborne imaging spectrometer mission over India using the Airborne Visible and InfraRed Imaging Spectrometer - Next Generation (AVIRIS-NG) instrument. NASA will fly the AVIRIS-NG instrument on ISRO's B-200 aircraft. This agreement falls under the Framework Agreement between NASA and Indian Space Research Organisation (ISRO) for Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes, signed on February 1, 2008.	24-Sep-15	24-Sep-20
321	Goddard Space Flight Center (GSFC)	Polytechnic of Namibia, Namibia University of Science and Technology (NUST)	Namibia (WA)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and Polytechnic of Namibia will cooperate on the AERONET program. NASA will provide equipment on loan in which Gobabeb will host at a mutually agreed location.	25-Sep-15	24-Sep-25
322	Headquarters (HQ)	The Ministry of Education and Human Resources, Tertiary Education and Scientific Research of the Republic of Mauritius	Mauritius (MP)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE Program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	5-Oct-15	5-Oct-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
323	All NASA Centers	Government of the Kingdom of Sweden	Sweden (SW)	Amendment and Extension 1 of U.S./Sweden Framework Agreement - Exploration and Use of Outer Space for Peaceful Purposes	Umbrella/Framework Agreement (UM/FW)	Amendment and Extension 1 of the Framework Agreement: U.S. and the Kingdom of Sweden agree to extend the duration of the agreement for 10 additional years, until October 14, 2025. Parties agree to amend the first sentence of Article 5.1 by replacing the word "national" with the word "applicable." Agreement between US and Sweden. Covers a multitude of civil space cooperation in Earth Science, Space Science, Biological and Physical Research, and other areas of mutual interest. Programs may be implemented using: spacecraft and space research platforms; scientific instruments onboard spacecraft and space research; sounding rocket and scientific balloon flights and campaigns; aircraft flights and campaigns; ground-based antennas for tracking and data acquisition; ground-based space research facilities; exchanges of scientific personnel; exchanges of scientific data; and education and public outreach activities. Swedish National Space Board (SNSB) is named as the Swedish implementing agency and NASA is named the US implementing agency.	6-Oct-15	14-Oct-25
324	Glenn Research Center at Lewis Field (GRC)	Canadensys (CAC)	Canada (CA)	Annex 1: Reimbursable Umbrella Space Act Agreement Between NASA and Canadensys Aerospace Corporation Regarding Environmental Testing of Space Exploration Hardware	Umbrella/Framework Agreement (UM/FW)	Annex 1: NASA GRC will provide testing of Canadensys technology to include thermal cycling of the partner's rover prototype drivetrain hardware.	13-Oct-15	12-Oct-20
325	Langley Research Center (LaRC)	The National Institute of Environmental Research of the Republic of Korea (NIER)	Korea, Republic of (KS)	Korea-United States Air Quality Field Study (KORUS-AQ)	Project-Specific Agreement (PSA)	This Korea-United States Air Quality Field Study (KORUS-AQ) agreement is for a scientific airborne campaign that will provide critical information on the challenges faced by satellites to distinguish air quality conditions at the surface from conditions at higher altitudes.	14-Oct-15	30-Nov-20
326	Headquarters (HQ),Jet Propulsion Laboratory (JPL)	Defense Research Establishment (FFI or Forsvarets Forskning Institutt in Norwegian)	Norway (NO)	Mars 2020 Radar Imagers for Mars' SubsurFAce eXperiment (RIMFAX) Phase B-F Agreement	Project-Specific Agreement (PSA)	This agreement is for the Norwegian Defense Research Establishment (FFI) to provide the Radar Imagers for Mars' subsurFAce eXperiment (RIMFAX) ground penetrating radar (GPR) to NASA for the Mars 2020 rover.	20-Oct-15	30-Jun-24
327	Goddard Space Flight Center (GSFC)	Centre for Geophysical Consultancy and Technological Transfer (CGCTT)	Vietnam (VM)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and the Center for Geophysical Consultancy and Technological Transfer of Vietnam will cooperate on the AERONET program. NASA will provide equipment on loan which the partner will host at a mutually agreed location.	23-Oct-15	22-Oct-25
328	Ames Research Center (ARC)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement (IA) Between NASA and the German Aerospace Center (DLR) for Cooperation on the Eu:CROPIS Mission	Implementing Arrangement/Agreement (IA)	Under this Implementing Arrangement (IA) NASA will develop and provide a secondary payload, the Power Cell Experiment, to DLR for integration into DLR's Eu:CROPIS small spacecraft bus.	26-Oct-15	26-Oct-19
329	Headquarters (HQ)	Israel Space Agency (ISA)	Israel (IS)	Framework Agreement Between NASA and the Israel Space Agency (ISA) for Cooperation in Aeronautics and the Exploration and Use of Airspace and Outer Space for Peaceful Purposes	Umbrella/Framework Agreement (UM/FW)	Framework Agreement between NASA and the Israel Space Agency (ISA) for Cooperation in Aeronautics and the Exploration and Use of Airspace and Outer Space for Peaceful Purposes.	31-Oct-15	13-Oct-25
330	Goddard Space Flight Center (GSFC)	Royal Institute of Technology (KTH)	Sweden (SW)	Amendment: Gamma Ray Large Area Space Telescope Mission (GLAST)/Fermi	Project-Specific Agreement (PSA)	Amendment: Fermi is a NASA mission whose scientific investigations were selected through a NASA AO 99-OSS-03. GLAST will identify and study nature's highest energy particle accelerators, measuring, with two instruments, the spectra and temporal histories of gamma rays in the energy range from 10 KeV to 300 GeV.	2-Nov-15	31-Dec-20
331	Headquarters (HQ),Jet Propulsion Laboratory (JPL)	University of Valladolid (UVA)	Spain (SP)	Mars 2020 SuperCam Calibration Target Agreement	Project-Specific Agreement (PSA)	This agreement is for the University of Valladolid (UVA) of Spain to provide a calibration target assembly to NASA for the Mars 2020 rover's SuperCam instrument.	3-Nov-15	30-Jun-24

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
332	George C. Marshall Space Flight Center (MSFC)	Ku Leuven, Katholieke Universiteit Leuven of Belgium (KUL)	Belgium (BE)	Global Precipitation Measurement (GPM)	Project-Specific Agreement (PSA)	NASA's Global Precipitation Measurement (GPM) mission consists of a constellation of international satellites that provide measurements in the microwave and infrared portions of the spectrum. Data from these satellites are processed into global products that estimate integrated precipitation for timescales on the order of three hours. The GPM mission also includes a ground validation component that quantifies the accuracy of precipitation data products. High-latitude precipitation is of particular interest to GPM ground validation because the data product algorithms used in these regions are relatively new and untested, and there are very few meteorological observations in Antarctica.	15-Nov-15	15-Nov-20
333	George C. Marshall Space Flight Center (MSFC)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Jupiter Icy Moons Explorer (JUICE) Mission - Particle Environments Package (PEP)	Project-Specific Agreement (PSA)	PEP is a plasma package with six sensors to characterize the plasma environment in the Jovian system. PEP will measure positive and negative ions, electrons, exospheric neutral gas, thermal plasma, and Energetic Neutral Atoms (ENAs) in the energy range from 0.001 eV to 1 MeV. PEP will combine remote global imaging via ENAs with in situ measurements, to address all scientific objectives of the JUICE mission relevant to particle measurements. PEP will seek answers for four overarching science questions: How does the co-rotating magnetosphere of Jupiter interact with the complex and diverse environment of Ganymede? How does the rapidly rotating magnetosphere of Jupiter interact with seemingly inert Callisto? What are the governing mechanisms and their global impact of release of material into the Jupiter magnetosphere from Europa and Io? How do internal and solar wind drivers cause such energetic, time-variable and multi-scale phenomena in the steadily rotating giant magnetosphere of Jupiter?	23-Nov-15	30-Jun-34
334	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	NASA - European Space Agency (ESA) Implementing Arrangement (IA) for the Modification and Delivery of the Hexapod Pointing System	Implementing Arrangement/Agreement (IA)	NASA and ESA have reached an understanding regarding ESA's updated scope of work for the Hexapod pointing system (Hexapod) in exchange for NASA providing a Columbus External Payload Adapter for ESA's Atmospheric Space Interactions Monitoring Instrument (ASIM), install the Columbus Ka-Bans antenna, and as a means of offsetting ESA's obligation to reimburse NASA for TDRSS support for ATV-4 and -5.	24-Nov-15	31-Dec-20
335	Headquarters (HQ)	European Space Agency (ESA)	European Space Agency (ESA)	Advanced Resistive Exercise Device (ARED) Kinematics Project Letter of Agreement	Implementing Arrangement/Agreement (IA)	A Letter of Agreement between ESA and NASA under the International Space Life Sciences Working Group (ISLSWG) ISS Arrangement for the Advanced Resistive Exercise Device (ARED) Kinematics Project on the ISS.	8-Dec-15	1-Dec-20
336	Headquarters (HQ)	Vietnam Academy of Science and Technology of the Socialist Republic of Vietnam	Vietnam (VM)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	9-Dec-15	31-Dec-00
337	Ames Research Center (ARC),Headquarters (HQ),Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	NASA and European Space Agency (ESA) Letter of Agreement (LOA) Regarding the Vestibular-Evoked Myogenic Potentials in Microgravity (VEMP)	Implementing Arrangement/Agreement (IA)	An LOA under the ISS International Space Life Sciences Working Group (ISLSWG) Arrangement. The LOA concerns NASA support of the ESA sponsored VEMP experiment. VEMP is an experiment that will assess otolith function on 12 crewmembers before, during and after long duration missions on the International Space Station.	11-Dec-15	31-Dec-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
338	Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Mars Exploration Rover 2003 (MER 2003) Mission - Mossbauer Spectrometers	Project-Specific Agreement (PSA)	Amendment: NASA and the German Aerospace Center (DLR) are cooperating on NASA's Mars Exploration Rover 2003 (MER 2003) mission, comprised of two separate rovers. The cooperation involves German provision of Mossbauer Spectrometer engineering and flight models, which will be part of the two rover's Athena payloads and will be mounted on instrument deployment devices.	16-Dec-15	31-Dec-20
339	Goddard Space Flight Center (GSFC)	German Aerospace Center (DLR)	Germany (GM)	Gamma Ray Large Area Space Telescope Mission (GLAST)/Fermi	Project-Specific Agreement (PSA)	Fermi is a NASA mission whose scientific investigations were selected through a NASA AO 99-OSS-03. GLAST will identify and study nature's highest energy particle accelerators, measuring, with two instruments, the spectra and temporal histories of gamma rays in the energy range from 10 KeV to 300 GeV.	16-Dec-15	31-Dec-20
340	Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Amendment: Mars Exploration Rover (MER 2003) Mission - Participating Scientists	Project-Specific Agreement (PSA)	Amendment: The NASA and the German Aerospace Center (DLR) are cooperating on NASA's MER 2003 Mission, comprised of two separate rovers. This cooperation involves DLR support of the following three German Participating Scientists on the MER 2003 science team: Mr. Johannes Brueckner, Mr. Stubbe Hviid, and Mr. Lutz Richter. All three were selected as Participating Scientists through the NASA Announcement of Opportunity AO-01-OSS-04.	16-Dec-15	31-Dec-20
341	Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Amendment: Mars Exploration Rover 2003 (MER 2003) Mission - Alpha Particle X-ray Spectrometer (APXS)	Project-Specific Agreement (PSA)	Amendment: NASA and the German Aerospace Center (DLR) are cooperating on NASA's Mars Exploration Rover 2003 (MER 2003) mission, comprised of two separate rovers. The cooperation involves German provision of Alpha Particle X-Ray Spectrometer (APXS) engineering and flight models, which will be part of the two rovers' Athena payloads.	16-Dec-15	31-Dec-20
342	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	Amendment and Extension: NASA-European Space Agency (ESA) Portable Pulmonary Function System Agreement	Project-Specific Agreement (PSA)	Amendment and Extension: This agreement amends the original NASA-ESA Portable Pulmonary Function System Agreement for the continued utilization of the Portable PFS and to extend the agreement.	18-Dec-15	31-Dec-20
343	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	Reimbursable Space Act Agreement Between NASA and the European Space Agency (ESA) for International Space Station (ISS) Crew Support Services	Implementing Arrangement/Agreement (IA)	Agreement for NASA to provide ISS crew support services for ESA. Services include training, Star City services, medical, launch and landing.	18-Dec-15	31-Dec-20
344	Goddard Space Flight Center (GSFC),Headquarters (HQ)	Prefeitura de Rio de Janeiro, Brazil	Brazil (BR)	Hazard Monitoring and Disaster Response In and Around Rio de Janeiro, Brazil	Project-Specific Agreement (PSA)	The purpose of this Agreement is to forge a closer scientific collaboration between NASA and the City of Rio de Janeiro, specifically through the exchange of knowledge between disciplines and the use of Earth observations data and data products to support innovative and ongoing efforts to anticipate, monitor and assess the contributions to disaster risk from natural hazards (including flooding, inundation, landslides, mudslides, drought, heat islands, etc.) in the vicinity of Rio de Janeiro. Collaboration between scientists at NASA and the Prefeitura, through the Instituto Pereira Passos (IPP), Rio de Janeiro Centro de Opera'es Rio (COR), and Funda'o Geo-Rio, would focus on enabling rapid dissemination of and access to satellite data products to enhance scientific understanding, education and risk awareness, and enabling societal benefit, such as crisis response.	22-Dec-15	22-Dec-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
345	Headquarters (HQ),Johnson Space Center (JSC)	Canadian Space Agency (CSA),Japan Aerospace Exploration Agency (JAXA),National Space Development Agency of Japan (NASDA),European Space Agency (ESA)	Multiple Signatories	Umbrella/Framework Agreement: Arrangement Among the Canadian Space Agency (CSA), the European Space Agency (ESA), NASA, and the National Space Development Agency of Japan Concerning International Space Life Sciences Flight Experiments on the International Space Station	Umbrella/Framework Agreement (UM/FW)	Umbrella/Framework Agreement: Extension of Comprehensive Arrangement between NASA, CSA, ESA, and NASDA (now JAXA) for International Space Life Sciences Flight Experiments on the International Space Station (ISS). In order to further the goal established by the International Space Life Sciences Working Group (ISLSWG), the Parties as ISLSWG members will implement an international approach to life sciences flight experiment recruitment, review, selection, and implementation on the ISS. This agreement establishes the general principles, terms, and conditions under which the Parties will implement the International Space Life Science experiments (flight experiment) for peaceful purposes on the ISS.	22-Dec-15	31-Dec-20
346	Ames Research Center (ARC)	Korea Aerospace Research Institute (KARI)	Korea, Republic of (KS)	Agreement Between NASA and Korea Aerospace Research Institute (KARI) for Associate Membership in the NASA Solar System Exploration Research Virtual Institute (SSERVI)	Project-Specific Agreement (PSA)	Provides for KARI associate membership in the SSERVI, a virtual science institute based at Ames for the study of the moon and planetary bodies.	29-Dec-15	29-Dec-25
347	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement (IA) Between NASA and the National Centre for Space Studies (CNES) on the Mars Science Laboratory (MSL) Mission	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) between NASA and CNES in providing significant portions of the Sample Analysis at Mars (SAM) and the Laser-Induced Remote Sensing for Chemistry and Micro-Imaging (ChemCam) payloads on the NASA Mars Science Laboratory (MSL) mission. This IA is under the U.S.-French Umbrella.	30-Dec-15	31-Dec-20
348	Goddard Space Flight Center (GSFC)	German Aerospace Center (DLR)	Germany (GM)	Amendment 1: Implementing Arrangement (IA) Between NASA and the German Aerospace Center (DLR) for Cooperation on the Mars Organic Molecule Analyzer (MOMA) Instrument	Implementing Arrangement/Agreement (IA)	Adds additional responsibilities to the original cooperation on the MOMA instrument. MOMA will fly on the European Space Agency (ESA) ExoMars mission.	4-Jan-16	23-Dec-23
349	Goddard Space Flight Center (GSFC)	Hokkaido University (HokuDai)	Japan (JA)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and the partner will cooperate on the AERONET program. NASA will provide equipment on loan which Kokkaido University will house at a mutually agreed location.	6-Jan-16	5-Jan-26
350	Goddard Space Flight Center (GSFC)	University of Versailes Saint-Quentin-en-Yvelines of France	France (FR)	Agreement Between NASA and the University of Versailles Saint-Quentin-en-Yvelines for Cooperation on a Network for the Detection of Atmospheric Chemical Change (NDACC) Validation Campaign	Project-Specific Agreement (PSA)	NASA Upper Atmospheric Research Program cooperation with the University of Versailles Saint-Quentin-en-Yvelines of France on a NDACC validation campaign.	11-Jan-16	30-Sep-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
351	Goddard Space Flight Center (GSFC)	Taipei Economic and Cultural Representative Office in the United States (TECRO)	Taiwan (TW)	Amendment: Agreement Between NASA and the American Institute in Taiwan (AIT) for Coordination Regarding Normal Operations and Special Uplink Operations for the FORMOSAT-3 Satellite System	Project-Specific Agreement (PSA)	Amendment: This Agreement (and the associated Coordination Arrangement) provides a framework to coordinate the operation of the FORMOSAT-3 Satellite (owned and operated by the National Space Organization (NSPO) of Taiwan) to prevent unacceptable interference to NASA's Earth science missions, including: FAST, GALEX, HESSI, ICESAT, SAMPEX, SWAS, TIMED, TRACE, and GLORY. The Agreement and Coordination Arrangement specify the parameters for uplink and downlink transmissions during normal operation of the FORMOSAT-3 satellite, and specifies pre-coordination required prior to special uplink operations required to upload Global Positioning System data. This activity is implemented by: (1) The Agreement between NASA and the American Institute in Taiwan (AIT), which is the U.S. liaison entity for USG activities with entities in Taiwan; and (2) The Coordination Arrangement between AIT and the Taipei Economic and Cultural Representative Office in the United States (TECRO), which is the Taiwanese liaison entity for Taiwanese activities with entities in the U.S. The period of performance of the activity is June 30, 2015 or until the FORMOSAT-3 Satellite is deactivated, whichever is sooner.	12-Jan-16	30-Jun-25
352	Glenn Research Center at Lewis Field (GRC)	Environment Canada	Canada (CA)	Amendment and Extension 1: NASA-Environment Canada (EC) Agreement for Cooperative Activities Pertaining to Atmospheric Icing Research	Project-Specific Agreement (PSA)	Amendment and Extension 1: NASA/EC will conduct cooperative activities related to icing cloud and mixed phase atmospheric definition, in-situ and remote instrumentation development, and data processing and analysis techniques. This interest concerns cooperative research to characterized atmospheric icing environments, to study the physical phenomena associated with the impact of liquid water droplets and ice crystals on aircraft surfaces, air data probes and engines, and to improve in-situ and remote sensing of the environment that would generate accurate and credible measurements for use by the aviation community and aviation weather forecasters. This amendment extends the expiration date of the agreement five years, adds new responsibilities to the original Agreement, changes the Environment and Climate Change Canada (ECCC) agreement Point of Contact, as well as sets a new schedule section within the original agreement.	22-Jan-16	31-Jan-21
353	Goddard Space Flight Center (GSFC),Headquarters (HQ),Jet Propulsion Laboratory (JPL)	The Gabonese Space Agency for Studies and Observations (AGEOS)	Gabon (GB)	Memorandum of Understanding (MOU) Between NASA and the Gabonese Space Agency for Studies and Observations of the Republic of Gabon for Cooperation on the Gabon Terrestrial Ecosystems Collaboration	Project-Specific Agreement (PSA)	The Gabon Terrestrial Ecosystems Collaboration (G-TEC) is a calibration and validation effort in Gabon for two Earth science satellite missions, the Global Ecosystem Dynamics Investigation Lidar (GEDI) and the joint NASA-ISRO Synthetic Aperture Radar Mission (NISAR). NASA will collect science data over test sites in Gabon with airborne instrument testbeds for the NISAR and GEDI missions, including the Uninhabited Aerial Vehicle Synthetic Aperture Radar (UAVSAR) instrument flown on the NASA C-20A research aircraft and the Land, Vegetation, and Ice Sensor (LVIS) instrument flown on the NASA B-200 research aircraft.	4-Feb-16	31-Oct-21
354	Goddard Space Flight Center (GSFC)	Instituto Superior Politecnico da Tundavala (ISPT)	Angola (AO)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and partner will cooperate on the AERONET program. NASA will provide equipment on loan to the Institute Superior Politecnico da Tundavala (ISPT). ISPT will host and maintain the equipment, and contribute to the AERONET database.	5-Feb-16	4-Feb-26

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
355	Ames Research Center (ARC)	Swiss International Air Lines Limited	Switzerland (SZ)	Nonreimbursable Space Act Agreement Between NASA and Swiss International Air Lines Limited on Research Studies for Improvement of Aviation Safety and Assuring Safe and Effective Human Systems Integration	Project-Specific Agreement (PSA)	This cooperative agreement aims to improve aviation safety and assure safe and effective human systems integration through collaborative research. NASA and SWISS will partner in the analysis of flight and human performance data to gain further insight into these issues. Mission Type: Air Space Operations and Safety.	9-Feb-16	31-Dec-20
356	Johnson Space Center (JSC)	The Universite Libre de Bruxelles	Belgium (BE)	International Lunar Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Vinciane Debaille of The Universite Libre de Bruxelles in Brussels, Belgium proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	10-Feb-16	31-Oct-20
357	Johnson Space Center (JSC)	University of Munster	Germany (GM)	International Lunar Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Erik Scherer of the (Universitat) University of Munster in Munster, Germany proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	10-Feb-16	31-Oct-20
358	Johnson Space Center (JSC)	ETH Zurich	Switzerland (SZ)	International Lunar Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Maria Schonbachler Eidgenossische Technische Hochschule Zurich in Zurich, Switzerland proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	10-Feb-16	31-Oct-20
359	Johnson Space Center (JSC)	University of Manchester	United Kingdom (UK)	International Lunar Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. John Pernet-Fisher of The University of Manchester in Manchester, United Kingdom, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	10-Feb-16	31-Oct-20
360	George C. Marshall Space Flight Center (MSFC)	University of Central Lancashire	United Kingdom (UK)	Agreement Between NASA and the University of Lancashire for Cooperation on the High Resolution Coronal Imager (Hi-C) Mission 36.314NS-Cirtain	Project-Specific Agreement (PSA)	Hi-C is a telescope designed to take the first images of the solar atmosphere with 170 km resolution in the extreme ultraviolet. Initially launched from the White Sands Missile Range -White Sands, New Mexico, on July 11, 2012, as a payload onboard a Terrier Black Brant Rocket, the intent of the Hi-C mission was to demonstrate the technology necessary to collect images at the 170 km resolution and investigate the scientific value of the data.	15-Feb-16	30-Sep-19
361	Headquarters (HQ)	Italian Space Agency (ASI)	Italy (IT)	Loan of Shuttle Simulator Hardware and Software	Project-Specific Agreement (PSA)	The agreement describes a four-year loan of NASA Shuttle Simulator Hardware and Software to the Italian Space Agency (ASI).	2-Mar-16	29-Mar-20
362	Glenn Research Center at Lewis Field (GRC)	Heriot-Watt University	United Kingdom (UK)	Reimbursable Space Act Agreement Between NASA and Heriot-Watt University for the Measurement of Q-Band Propagation Data in Edinburgh	Project-Specific Agreement (PSA)	The purpose of this Agreement is to set forth the respective responsibilities of the Implementing Agencies and the terms and conditions under which they will cooperate in the installation and operation of the Q-band RF Propagation Monitoring Station at the Heriot-Watt University in Edinburgh, Scotland.	4-Mar-16	4-Mar-21
363	Goddard Space Flight Center (GSFC)	National Centre for Scientific Research (CNRS)	France (FR)	Gamma Ray Large Area Space Telescope Mission (GLAST)/Fermi	Project-Specific Agreement (PSA)	NASA and the National Centre for Scientific Research (CNRS) will cooperate on the GLAST mission.	15-Mar-16	31-Dec-20
364	Johnson Space Center (JSC)	Australian National University (ANU)	Australia (AS)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Trevor Ireland of The Australian National University in Canberra, Australia, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	18-Mar-16	18-Mar-21

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
365	Johnson Space Center (JSC)	Vrije University Brussels (VUB)	Belgium (BE)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Philippe Claeys of VUB in Brussels, Belgium, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	18-Mar-16	18-Mar-21
366	Johnson Space Center (JSC)	The Universite Libre de Bruxelles	Belgium (BE)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Rosalind Armytage of the Universite Libre de Bruxelles in Bruxelles, Belgium, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	18-Mar-16	18-Mar-21
367	Johnson Space Center (JSC)	The Universite Libre de Bruxelles	Belgium (BE)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Vinciane Debaille of Universite Libre de Bruxelles, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	18-Mar-16	18-Mar-21
368	Johnson Space Center (JSC)	CRPG-CNRS	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Yves Marrocchi of CRPG-CNRS in Nancy, France, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	18-Mar-16	18-Mar-21
369	Johnson Space Center (JSC)	Museum National d'Histoire Naturelle	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Emmanuel Jacquet of the Museum National d'Histoire Naturelle de Paris in Paris, France, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	18-Mar-16	18-Mar-21
370	Johnson Space Center (JSC)	the CNRS Midi-Pyrenees	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Ghylaine Quitte of the CNRS Midi-Pyrenees (on behalf the Institut de Recherche en Astrophysique et Planetologie - IRAP, OMP) in Toulouse, France, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	18-Mar-16	18-Mar-21
371	Johnson Space Center (JSC)	CEREGE	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Jerome Gattacceca of Cerege in Aix en Provence, France, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	18-Mar-16	18-Mar-21
372	Johnson Space Center (JSC)	University of Cologne	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Dominik Hezel of University of Cologne, Dep. of Geology & Mineralogy in Cologne, Germany, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	18-Mar-16	18-Mar-21

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
373	Johnson Space Center (JSC)	Universita di Pisa	Italy (IT)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Maurizio Gemelli of Universita di Pisa in Pisa, Italy, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator).	18-Mar-16	18-Mar-21
374	Johnson Space Center (JSC)	Kyushu University	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Takaaki Noguchi of Kyushu University in Fukuoka, Japan, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	18-Mar-16	18-Mar-21
375	Johnson Space Center (JSC)	The University of Cape Town	South Africa (SF)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Geoffrey H. Howarth of University of Cape Town, in Rodebosch, South Africa proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	18-Mar-16	18-Mar-21
376	Johnson Space Center (JSC)	Lund University	Sweden (SW)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Stephen Hall of Lund University in Lund, Sweden, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	18-Mar-16	18-Mar-21
377	Johnson Space Center (JSC)	ETH Zurich	Switzerland (SZ)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Maria Schonbachler of ETH Zurich in Zurich, Switzerland, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	18-Mar-16	18-Mar-21
378	Johnson Space Center (JSC)	University of Bern	Switzerland (SZ)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Antoine Roth of University of Bern in Bern, Switzerland, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	18-Mar-16	18-Mar-21
379	Johnson Space Center (JSC)	University of Bern	Switzerland (SZ)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Yann Brouet of the Physics Institute at the Univeristy of Bern, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	18-Mar-16	18-Mar-21
380	Johnson Space Center (JSC)	Natural History Museum	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Joe Michalski of the Natural History Museum in London, UK, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	18-Mar-16	18-Mar-21
381	Headquarters (HQ)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Reimbursable Space Act Agreement Between NASA and the Japan Aerospace Exploration Agency (JAXA) for International Space Station (ISS) Crew Support Services	Project-Specific Agreement (PSA)	Reimbursable Agreement for NASA to provide crew support services to JAXA. Services include training support, medical support, Star City support, and launch and landing support.	23-Mar-16	31-Dec-24

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
382	Goddard Space Flight Center (GSFC)	St. Petersburg State University (Russia)	Russia (UR)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and St. Petersburg State University (SPSU-Russia) will cooperate on the operation of an AERONET sun photometer station and/or Lidar stations located at SPSU. SPSU has their own instrument, and NASA will provide calibration on that instrument.	29-Mar-16	31-Dec-24
383	Jet Propulsion Laboratory (JPL)	European Space Agency (ESA)	European Space Agency (ESA)	Extension 1: International Rosetta Mission	Project-Specific Agreement (PSA)	Extension 1: Memorandum of Understanding (MOU) for cooperation on the International Rosetta Mission.	14-Apr-16	30-Sep-19
384	Goddard Space Flight Center (GSFC)	Atomic Energy Commission (CEA)	France (FR)	Extension 2: Gamma Ray Large Area Space Telescope Mission (GLAST)/Fermi	Project-Specific Agreement (PSA)	Extension 2: Fermi is a NASA mission whose scientific investigations were selected through a NASA AO 99-OSS-03. GLAST will identify and study nature's highest energy particle accelerators, measuring, with two instruments, the spectra and temporal histories of gamma rays in the energy range from 10 KeV to 300 GeV.	15-Apr-16	31-Dec-20
385	Goddard Space Flight Center (GSFC)	The Korea Institute of Ocean Science and Technology (KIOST)	Korea, Republic of (KS)	Memorandum of Understanding (MOU) Between NASA and the Korea Institute of Ocean Science and Technology of the Republic of Korea for Cooperation on the United States-Korea Ocean Color Field Study (KORUS-OC)	Project-Specific Agreement (PSA)	Memorandum of Understanding (MOU): The Korea-United States Ocean Color Field Study (KORUS-OC) is a science mission that will use ship, airborne, and satellite observations to study ocean color in preparation for future geostationary missions. KORUS-OC follows the Korea-United States Air Quality Field Study (KORUS-AQ).	16-Apr-16	31-Oct-20
386	Kennedy Space Center (KSC)	European Space Agency (ESA)	European Space Agency (ESA)	Amendment and Extension 1: Implementation Plan on Development Approaches for Vehicle Assembly, Integration, Test, and Operations at Launch Complexes	Implementing Arrangement/Agreement (IA)	Amendment and Extension 1: NASA/the European Space Agency (ESA) under the Framework Agreement (Space Transportation MOU signed 9/11/09) will exchange available information and technical data on and jointly study development approaches for vehicle assembly, integration, test, and operations at launch complexes.	20-Apr-16	11-Sep-19
387	Headquarters (HQ)	European Space Agency (ESA)	European Space Agency (ESA)	Amendment and Extension 1: Implementation Plan on Development and Test Approaches for Re-ignitable Cryogenic Engines and Stages	Implementing Arrangement/Agreement (IA)	Amendment and Extension 1: NASA/ESA under the Framework Agreement (Space Transportation MOU signed 9/11/09) will exchange available information and technical data on and jointly study development and test approaches for re-ignitable cryogenic engines and stages.	20-Apr-16	11-Sep-19
388	Goddard Space Flight Center (GSFC),Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Amendment: L-Band (DESDynI-Tandem-L) Synthetic Aperture Radar Pre-Phase A	Project-Specific Agreement (PSA)	Amendment: Study agreement for potential future cooperation in L-band synthetic aperture radar.	21-Apr-16	31-Dec-20
389	Headquarters (HQ)	Korea Advanced Institute of Science and Technology (KAIST),Korea Aerospace Research Institute (KARI),Korea Agency for Infrastructure Technology Advancement (KAIA),Korea Astronomy and Space Science Institute (KASI),Korea Meteorological Administration (KMA)	Korea, Republic of (KS)	Framework Agreement Between the Government of the United States of America and the Government of the Republic of Korea for Cooperation in Aeronautics and the Exploration and Use of Airspace and Outer Space for Civil and Peaceful Purposes	Umbrella/Framework Agreement (UM/FW)	Framework Agreement which sets for the terms and conditions for cooperation between the parties in aeronautics and the exploration and use of airspace and outer space for civil and peaceful purposes in areas of common interest.	27-Apr-16	27-Apr-27
390	Goddard Space Flight Center (GSFC)	Catholic University of Cameroon (CATUC)	Cameroon (CM)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and Catholic University of Cameroon (CATUC) will cooperate on the operation of an AERONET sun photometer station and/or Lidar stations located at CATUC. CATUC will maintain the NASA-owned instrument, and NASA will provide calibration on that instrument.	28-Apr-16	27-Mar-26

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
391	Goddard Space Flight Center (GSFC),Headquarters (HQ)	European Space Agency (ESA)	European Space Agency (ESA)	Reimbursable Space Act Agreement Between NASA and the European Space Agency (ESA) for Use of NASA's Space Network Tracking and Data Relay Satellite System (TDRSS) in Support of Vega Launches for ESA	Project-Specific Agreement (PSA)	This Reimbursable Space Act Agreement (hereinafter referred to as 'Agreement') is for the purpose of setting out the terms and conditions with regard to both the initial and the recurrent work to be performed by NASA for ESA's use of the Space Network Tracking and Data Relay Satellite System (TDRSS) in support of telemetry data independent of the Telemetry Ground Stations for the Vega Launch Systems (VEGA).	24-May-16	24-May-21
392	Goddard Space Flight Center (GSFC)	Curtin University of Technology	Australia (AS)	Letter of Agreement Between NASA and Curtin University for Cooperation on Ocean Color Research	Project-Specific Agreement (PSA)	NASA and Curtin University scientists will cooperate on ocean color research in the Antarctic Ocean (aka Southern Ocean).	25-May-16	25-May-21
393	Ames Research Center (ARC)	German Aerospace Center (DLR)	Germany (GM)	Extension 2: Memorandum of Understanding (MOU) Between NASA and the Deutshes Zentrum Fur Luft - Und Raumfahrt for the Stratospheric Observatory for Infrared Astronomy (SOFIA)	Project-Specific Agreement (PSA)	Extension 2: The Memorandum of Understanding (MOU) between NASA and the Deutsches Zentrum Fur Luft-Und Raumfahrt (DLR) for the Stratospheric Observation for Infrared Astronomy (SOFIA) Program. Desiring to continue cooperation on SOFIA Program under MOU signed December 16 and 20, 1996, as amended and extended by the agreement signed on December 11 and 15, 2006; and remain in force until December 15, 2020 (signed June 2, 2016).	2-Jun-16	15-Dec-20
394	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	Reimbursable Space Act Agreement Between NASA and the European Space Agency (ESA) for the Use of NASA's Common Spares Pool (CSP) on the International Space Station (ISS)	Implementing Arrangement/Agreement (IA)	This agreement replaced the 2010 Agreement with ESA regarding Common Spares Pool (CSP). ESA has requested that NASA provide ESA with access to NASA's Common Spares Pool. This Agreement describes the following: Process and mechanism by which ESA will participate in the CSP; ESA's portion of administrative, material, repair retention, repair and CSP sustaining engineering support costs; Means for determining if additional CSP items must be procured to support ESA utilization of the CSP; Means by which ESA will reimburse NASA for these services; Priority of use of spares; Roles and responsibilities; and Upmass/downmass requirements.	4-Jun-16	31-Dec-20
395	Glenn Research Center at Lewis Field (GRC)	York University	Canada (CA)	Amendment 2: Super-Critical Water Oxidation (SCWO) Test Facility Agreement	Project-Specific Agreement (PSA)	Amendment 2: NASA is loaning the Super-Critical Water Oxidation (SCWO) Test Facility to York University in Toronto, Canada. York University will return the Test Facility to operational status and use it for 18 months for research. NASA will be able to collaborate on research and review the data.	6-Jun-16	31-Mar-21
396	All NASA Centers	United Arab Emirates Space Agency (UAESA)	United Arab Emirates (AE)	Implementing Arrangement (IA) Between NASA and the United Arab Emirates Space Agency (UAESA) for Cooperation in the Exploration of Mars	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) between NASA and United Arab Emirates Space Agency (UAESA) for cooperation in the Exploration of Mars.	12-Jun-16	31-Dec-24
397	Headquarters (HQ)	United Arab Emirates Space Agency (UAESA)	United Arab Emirates (AE)	Framework Agreement Between the Government of the United States of America and the Government of the Unite Arab Emirates for Cooperation in Aeronautics and the Exploration and Use of Airspace and Outer Space for Peaceful Purposes	Umbrella/Framework Agreement (UM/FW)	Framework Agreement which sets the obligations, terms and conditions for cooperation between the Parties in aeronautics and the exploration and use of airspace and outer space for peaceful purposes in areas of common interest.	12-Jun-16	12-Jun-26
398	Ames Research Center (ARC),Headquarters (HQ),Johnson Space Center (JSC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Implementing Arrangement: NASA - Japan Aerospace Exploration Agency (JAXA) Letter of Agreement (Mice Tissue Sharing)	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA): Letter of Agreement under the ISLSWG Arrangement. JAXA sharing one and a half eyeballs from each mouse flown to the International Space Station for JAXA's first rodent mission.	17-Jun-16	31-Dec-20
399	Goddard Space Flight Center (GSFC)	V.N. Sukachev Institute of Forest, Siberian Branch, Russian Academy of Sciences (RAS)	Russia (UR)	Siberian Boreal Forest Research in Krasnoyarsk	Project-Specific Agreement (PSA)	NASA and the Russian Academy of Sciences (RAS) will continue to cooperate on Siberian boreal forest research in Krasnoyarsk, Russia. NASA and RAS conduct joint field campaigns each summer.	24-Jun-16	15-Jun-21

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
400	Headquarters (HQ)	Ministry of Education and Economic Development of Bermuda	Bermuda (BD)	Extension 1: Agreement Between NASA and the Ministry of Transport of the Government of Bermuda for Space Flight Temporary Mobile Tracking Station	Project-Specific Agreement (PSA)	Extension 1: Agreement between NASA and the Ministry of Transport of the Government of Bermuda for a Space Flight Temporary Mobile Tracking Station.	30-Jun-16	30-Jun-26
401	Ames Research Center (ARC)	Victorian Space Science Education Center (VSSEC)	Australia (AS)	Cooperative Agreement for Collaboration on a Quantum Computing Curriculum	Project-Specific Agreement (PSA)	The Agreement enables ARC advice and guidance on the contents of the academic curriculum. Victorian Space Science Education Center (VSSEC) in Australia will lead and perform most of the work on the curriculum, which will be used in Australia, not the USA.	13-Jul-16	19-Jul-19
402	Ames Research Center (ARC)	Korea Agency for Infrastructure Technology Advancement (KAIA)	Korea, Republic of (KS)	Visiting Researcher Agreement (VRA) for Dr. Yeonju Eun	Visiting Researcher Agreement (VRA)	Dr. Yeonju Eun will conduct joint research with NASA researchers to continue developing a simulation model of Incheon International Airport (ICN) for various operational conditions. Dr. Eun and NASA researchers will also jointly develop optimization schedulers to schedule surface traffic to improve efficiency, predictability, and throughput of airport surface operations in the presence of uncertainties and various operational constraints. Dr. Eun will also learn how to use the real-time traffic generation software to eventually develop a real-time simulation model for human-in-the-loop simulations.	18-Jul-16	31-Dec-19
403	Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Dawn Mission	Project-Specific Agreement (PSA)	Amendment: NASA and DLR have expressed a mutual interest in cooperating on NASA's Dawn mission. The Dawn mission will observe the two most massive asteroids known, Vesta and Ceres, to improve our understanding of how planets formed during the earliest epoch of the solar system. JPL will manage the Dawn project and the Orbital Sciences Corporation will develop the spacecraft. The mission is scheduled to launch in May 2006 from KSC.	21-Jul-16	31-Jul-19
404	Headquarters (HQ)	Mad Science Group (MSG)	Canada (CA)	Extension 1: Non-Reimbursable Space Act Umbrella Agreement Between the Mad Science Group (MSG) of Canada and NASA for a Strategic Alliance to Foster Science, Technology, Engineering and Mathematics (STEM) Education and Public Outreach Activities	Umbrella/Framework Agreement (UM/FW)	Mission Directorates: Office of Education, SMD, and Office of Communications. Extension: This letter extends Agreement CA-0452-0 which shall govern NASA's ongoing collaboration with Mad Science Group to foster STEM education and public outreach activities. NASA agrees to provide support of projects undertaken in any Annex, internal coordination of approvals for Annexes, and provide a single point of contact for Annex development and operations. Original: This Umbrella Agreement shall be for the purpose of continuing and expanding the NASA and MSG relationship begun in 2006, under the November 2006 "Non-Reimbursable Space Act Agreement between NASA and the Mad Science Group" for education and outreach focused on science, technology, engineering, and mathematics (STEM) concepts and NASA content in an entertaining, instructional format. Annex One will continue The Academy of Future Space Explorers ("ACADEMY" or "AFSE") which is an instructor-mediated, entertaining educational experience in the form of in-school, afterschool, summer, and community-based programming designed for children in grades K-6 and currently available in North America and in international locations. MSG delivers NASA content in a format that is correlated to all state curricula and the National Science Education Standards throughout the world via its franchise network.	21-Jul-16	22-Jul-21

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
405	Johnson Space Center (JSC)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement (IA) Between NASA and German Aerospace Center (DLR) for Cooperation on Human Research Investigations Utilizing the Human Exploration Research Analog (HERA) Facility	Implementing Arrangement/Agreement (IA)	This Implementing Arrangement (IA) enables DLR sponsored human research investigations which utilize the NASA HERA facility.	11-Aug-16	1-Nov-21
406	Ames Research Center (ARC)	Netherlands Organization for Scientific Research (NWO)	Netherlands, The (NL)	Astrochemistry and Astrobiology Project (AAP)	Project-Specific Agreement (PSA)	The National Aeronautics and Space Administration (NASA) and the Netherlands Organization for Scientific Research (NWO) have expressed a mutual interest in pursuing cooperation on the Astrochemistry and Astrobiology Project (AAP). The AAP is the study of the organic inventory of space, in particular in regions of star and planet formation, and its relationship to the prebiotic origin of life. The AAP program consists of a coherent set of experimental, quantum chemical, and astronomical modeling efforts on characteristics and reaction pathways on molecules of astrophysical relevance jointly performed by NASA's Ames Research Center's (ARC) Astrochemistry Laboratory and the NWO/Dutch Astrochemistry Network-II (DAN-II).	16-Aug-16	16-Aug-21
407	Johnson Space Center (JSC)	Universitat zu Koln	Germany (GM)	International Lunar Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Frank Wombacher of the Universitat zu Koln, in Koln, Germany proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	24-Aug-16	31-Oct-21
408	Johnson Space Center (JSC)	HelmholtzZentrum Muenchen	Germany (GM)	International Lunar Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Philippe Schmitt-Kopplin of Helmholtz Zentrum Muenchen in Neuherberg, Germany proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	24-Aug-16	31-Oct-21
409	Johnson Space Center (JSC)	Naturhistoriska Riksmuseet	Sweden (SW)	International Lunar Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Joshua Snape of Naturhistoriska Riksmuseet in Stockholm, Sweden proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	24-Aug-16	31-Oct-21
410	Goddard Space Flight Center (GSFC),Headquarters (HQ)	Japan Aerospace Exploration Agency (JAXA),Mitsubishi Heavy Industries, LTD	Japan (JA)	Reimbursable Space Act Agreement Between NASA and The Mitsubishi Heavy Industries, LTD. (MHI) for NASA Tracking and Data Relay Satellite System (TDRSS) and Support Of The MHI H-IIA / EMM Launch Vehicle	Project-Specific Agreement (PSA)	This Reimbursable Space Act Agreement (hereinafter referred to as 'Agreement') will be for the purpose of documenting the work to be performed by NASA for the MHI H-IIA/EMM launch, currently scheduled for the summer of 2020. The H-IIA flight plan for this launch requires communication coverage by the NASA TDRSS. MHI will develop the preliminary flight plan in 2016, in order to confirm the compatibility of the EMM requirement to H-IIA with TDRSS. As such, NASA and MHI have agreed on a staged approach for the funding of this work. In the event that the preliminary flight plan determines that there is no compatibility with TDRSS, MHI will terminate this agreement.	2-Sep-16	2-Sep-21
411	Goddard Space Flight Center (GSFC)	Dibrugarh University	India (IN)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	Cooperative research on aerosols using sun photometers integrated into a global network. Dibrugargh University will host a NASA-owned instrument.	7-Sep-16	6-Sep-26

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
412	Headquarters (HQ)	International Space University (ISU)	France (FR)	Amendment 6: Visiting Researcher Placements of International Space University (ISU) Masters of Space Studies (MSS) Students	Visiting Researcher Agreement (VRA)	Amendment 6: This Visiting Researcher Agreement (VRA) provides for approved students enrolled in ISU's Master of Space Studies (MSS) program to work on projects and/or research of benefit to NASA at selected NASA installations in satisfaction of Module 5 of ISU's MSS program, entitled: Professional Placements. The Parties desire to extend this cooperation, wherein approved ISU students will be assigned to selected NASA installations for a period of approximately 12 weeks to work in areas and on projects agreed to by NASA. Amendment 5 - It provides for approved students enrolled in ISU's Master of Space Studies program to be assigned to selected NASA installations for a period of approximately 12 weeks to work in areas and on projects agreed to by NASA. Amendment 4 - It provides for approved students enrolled in ISU's Master of Space Studies program to be assigned to selected NASA installations for a period of approximately 12 weeks to work in areas and on projects agreed to by NASA. Amendment 3 - NASA/ISU have enjoyed successful cooperation for many years in a cooperative activity wherein students enrolled in ISU's Master of Space Studies (MSS) program and Master of Space Management (MSM) program work on projects and/or research of benefit to NASA at selected NASA Centers in satisfaction of Module 5 of ISU's MSS or MSM programs, entitled: Professional Placements and Individual Projects. Approved ISU students will be assigned to selected NASA Centers for a period.	9-Sep-16	24-Sep-19
413	Goddard Space Flight Center (GSFC)	Universidad de San Francisco de Quito (USFQ)	Ecuador (EC)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and Universidad de San Francisco de Quito (USFQ) will cooperate on the operation of an AERONET sun photometer station and/or Lidar stations located at USFQ. USFQ will maintain the NASA-owned instrument, and NASA will provide calibration on that instrument.	16-Sep-16	16-Sep-26
414	George C. Marshall Space Flight Center (MSFC)	Swedish Institute of Space Physics (IRF),Swedish National Space Board (SNSB)	Sweden (SW)	Jupiter Icy Moons Explorer (JUICE) Mission - Particle Environments Package (PEP)	Implementing Arrangement/Agreement (IA)	NASA and the Swedish National Space Board (SNSB) will collaborate on the development of the Particle Environment Package (PEP) of the Jupiter Icy-Moons Explorer (JUICE) mission. PEP is a plasma package with six sensors to characterize the plasma environment in the Jovian system. PEP shall measure positive and negative ions, electrons, exospheric neutral gas, thermal plasma, and energetic neutral atoms (ENAs) in the energy range from 0.001 eV to 1 MeV. PEP shall combine remote global imaging via ENAs with in-situ measurements, to address all scientific objectives of the JUICE mission relevant to particle measurements. Their work on the JUICE mission will be governed by the terms and conditions of the Framework Agreement between the Government of the United States of America and the Government of the Kingdom of Sweden for Cooperative Activities in the Exploration and Use of Outer Space for Peaceful Purposes, signed in Stockholm on October 14, 2005, and amended in Washington, on October 6, 2015.	20-Sep-16	20-Sep-34

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
415	Glenn Research Center at Lewis Field (GRC)	National Centre for Space Studies (CNES)	France (FR)	Amendment 2: Dispositif pur l'Etude de la Croissance et des Liquides Critiques (DECLIC)	Project-Specific Agreement (PSA)	Amendment 2: A second amendment was added to the agreement. This amendment also details the refurbishment and re-launch of the DECLIC hardware and extends the Agreement to December 31, 2024, to enable the completion of the ISS operations for the HTI-R insert which is currently on-orbit and the launch and ISS operations of the DSI-R and ALI-R inserts. The original agreement was amended to include collaboration on upgraded versions of the following three DECLIC inserts: the High Temperature Insert-Reflight (HTI-R), the Directional Solidification Insert-Reflight (DSI-R), and the Alice-Like Insert-Relight (ALI-R). In the original agreement, NASA agreed to provide a launch capability to, and on-orbit accommodations for the DECLIC hardware on the ISS. In addition, CNES received a 12-month on-orbit operational period of utilization by its science investigators and the necessary ISS resources, such as power and crew time.	21-Sep-16	31-Dec-24
416	Goddard Space Flight Center (GSFC)	Italian Space Agency (ASI)	Italy (IT)	NASA's Swift Gamma Ray Burst Explorer Mission	Project-Specific Agreement (PSA)	The overall scientific objective of the Swift mission is to make a comprehensive study of hundreds of gamma ray burst events in order to determine the origin and physical processes of these phenomena. A Burst Alert Telescope (BAT) shall conduct the initial observations of about one hundred burst events per year.	23-Sep-16	31-Dec-20
417	Langley Research Center (LaRC)	French National Aerospace Research Center (ONERA)	France (FR)	Agreement Between NASA and the Office National d'Etudes et de Recherches Aerospatiales of France (ONERA) on Reducing Aircraft Noise	Project-Specific Agreement (PSA)	NASA and ONERA seek to cooperate to advance the state-of-the-art in aircraft noise prediction and human response to noise through validation of the requisite models using advanced measurement methods and comprehensive data sets. The cooperation will create a technical forum through which the parties can share technical knowledge and data in order to independently improve their own capabilities with the overall objective of mitigating the effects of civil air transportation noise. The aircraft noise simulation work under this agreement incorporates the content of the NASA, German Aerospace Center (DLR), and ONERA aircraft noise simulation work group. An informal series of meetings on microphone phased array signal processing methods, which were partially-sponsored by the American Institute of Aeronautics and Astronautics Aeroacoustics technical committee, have taken place over the past several years. The collaboration among subject matter experts in the noise community has been beneficial in establishing a broad reach and field of input. Under a prior agreement that took place from January 2012 to April 2015, the Parties cooperated in the area of acoustic liners, specifically related to impedance education methods and propagation codes. This Agreement continues work in this area as part of the effort to validate noise prediction methods.	27-Sep-16	30-Sep-19

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
418	Headquarters (HQ)	Israel Space Agency (ISA)	Israel (IS)	Reimbursable Space Act Agreement Between NASA and the Israel Space Agency of the State of Israel for Participation in the NASA International Internship Program (NASA I^2)	Umbrella/Framework Agreement (UM/FW)	This Reimbursable Space Act Agreement will be for the purpose of facilitating ISA's participation in the NASA International Internship Program, referred to as NASA I squared, designed to provide a collaborative environment where U.S. interns (university undergraduate level students) or fellows (university graduate level students) can interact and work alongside with international peers on research opportunities. NASA internship and fellowship sessions are arranged in three Terms during the calendar year (Spring, Summer, and Fall Terms). To establish a collaborative and integrated environment, ISA's interns or fellows must schedule internships and fellowships during the same (or substantially similar) Terms as their U.S. counterparts. As part of the program implementation, ISA may provide NASA with a range of 2-5 candidates per Term, from which NASA will select an intern or fellow for the research or project opportunities identified in NASA's One Stop Shopping Initiative (OSSI). In addition, ISA will disseminate information about NASA I squared to university students throughout Israel, including the educational requirements the applicants must meet.	27-Sep-16	30-Dec-19
419	Headquarters (HQ)	Chinese Aeronautical Establishment (CAE)	China, People's Republic of (CH)	Memorandum of Understanding (MOU) Between the National Aeronautics and Space Administration and the Chinese Aeronautical Establishment Concerning Cooperation in Air Traffic Management	Project-Specific Agreement (PSA)	The Memorandum of Understanding (MOU) establishes a structure for the Parties to advance air transportation automation for the benefit of the U.S. and Chinese aviation industries operating in China. To achieve this purpose, the Parties agree to undertake cooperative activities to collaborate in the area of air traffic flow management in China. This could provide the highest impact to the system as a whole through research on air traffic management system architecture. The work performed through this activity complements the work being performed by the Airspace Operations and Safety Program within NASA's Aeronautics Research Mission Directorate. NASA will accomplish this work in coordination with U.S. airlines and U.S. industry. It is also highly synergistic with work being performed by CAE and CAE's partners, which include but are not limited to the China Civil Aviation Authority, China Air Traffic Management Bureau, Chinese Airports, and Chinese Airlines. The result of this collaboration will lead to improvements in advanced air transportation automation concepts and technologies, which will be mutually beneficial to both NASA and CAE and their respective additional partners.	27-Sep-16	30-Sep-21

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
420	Headquarters (HQ)	Government of the Kingdom of Norway	Norway (NO)	Amendment and Extension 3: Agreement Between the United States of America and the Kingdom of Norway for Cooperation in the Civil Uses of Outer Space	Umbrella/Framework Agreement (UM/FW)	Amendment and Extension 3: The U.S. and the Kingdom of Norway, pursuant to Article 11 of the Agreement signed 10/20/2000 and 11/14/2001, and extended for 10 years by an agreement signed on 10/23/2006, agree to extend the duration of the Agreement for another 10 years, thus extending the expiration date until 11/14/2026. The Parties also agree, pursuant to Article 10 of the Agreement to amend the Agreement by replacing Article 7 in its entirety with new language. 2nd Extension: U.S. Geological Survey (USGS) added as a U.S. Implementing Agency pursuant to Article 2. 1st Extension: This is an extension of the umbrella/framework agreement between the US and Norway for cooperation in the civil uses of outer space. The parties cooperation will be in sounding rocket activity, Space science, Earth science, satellite data acquisition and tracking, and other space activities. The specific cooperation will be set forth in Implementing Arrangements between the Implementing Agencies. NASA and NOAA are the Implementing Agencies for the U.S., and the Norwegian Space Centre (NSC) is the Implementing Agency for Norway.	30-Sep-16	14-Nov-26
421	JSC White Sands Test Facility (WSTF)	Queensland University of Technology	Australia (AS)	Amendment 1: Cooperation in Research to Increase Understanding of the Ignition and Combustion of Materials in Elevated Oxygen Conditions in Both Normal Gravity and Reduced Gravity Environments	Project-Specific Agreement (PSA)	Amendment 1: NASA/Queensland University of Technology have a mutual interest in cooperating in research to increase understanding of the ignition and combustion of materials in elevated oxygen conditions in both normal gravity and reduced gravity environments. In particular, the Parties seek to develop models characterizing the ignition and burning of elemental metals and alloys in oxygen-enriched environments. This will help to facilitate safety in space flight activities.	5-Oct-16	25-Jul-21
422	Goddard Space Flight Center (GSFC)	Lake Chad Basin Commission (LCBC)	Chad (CD)	Aerosol Robotic Network (AERONET) and Micro Pulse Lidar Network (MPL/NET)	Project-Specific Agreement (PSA)	NASA will provide a Sun Photometer and/or Lidar to the partner; the Partner will tend the instrument(s) and ensure data is uploaded to the global databases.	5-Oct-16	4-Oct-26

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
423	Goddard Space Flight Center (GSFC)	Centre National De La Recherche Scientifique,National Centre for Space Studies (CNES),Universite Joseph Fourier a Grenoble	France (FR)	Implementing Arrangement (IA) Between NASA and the Centre National D'etudes Spatiales of France (CNES) on the Space Environment Testbed (SET) Mission	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) Between NASA/CNES as NASA's Science Mission Directorate (SMD) is directing the development of the SET mission, part of the LWS Program. NASA will develop the SET carrier that provides a single interface between SET experiments and a non-NASA host spacecraft. The carrier holds four experiments as follows: the Cosmic Radiation Environment Dosimetry and Charging Experiment (CREDANCE) space weather monitor; the Dosimetry Intercomparison and Miniaturization Experiment (DIME); the Characterization of Proton Effects and Enhanced Low Dose Rate Sensitivity (ELDRS) in Bipolar Junction Transistors; and the Commercial Off-the-Shelf (COTS-2) digital technologies. The primary scientific objectives will be to define space environment effects and degradation mechanisms, reduce uncertainties in the environment and its effects on spacecraft and spacecraft payloads, and improve design and operations guidelines and test protocols to reduce spacecraft anomalies and failures during operations due to environmental effects. The COTS-2 experiment will be used to measure the effects of the space ionizing radiation environment on COTS digital microelectronics devices in order to improve performance prediction in space for future digital devices. CNES will provide for the design and the breadboard fabrication of the COTS-2 digital microelectronics experiment, in collaboration with the French laboratories.	6-Oct-16	31-Dec-20
424	George C. Marshall Space Flight Center (MSFC)	Government of the Italian Republic	Italy (IT)	Cooperative Agreement with the Italian National Institute for Astrophysics Osservatorio Astronomico di Brera in the Area of X-ray Optics Development	Project-Specific Agreement (PSA)	Cooperative Agreement with the Italian National Institute for Astrophysics Osservatorio Astronomico di Brera in the area of x-ray optics development.	13-Oct-16	30-Sep-20
425	Headquarters (HQ)	Canadian Space Agency (CSA)	Canada (CA)	Surface Water Ocean Topography (SWOT) Phase C-F	Project-Specific Agreement (PSA)	Canadian Space Agency (CSA) to provide Extended Interaction Klystrons (EIKs) as part of the NASA KaRIn instrument.	17-Oct-16	20-Oct-30
426	Goddard Space Flight Center (GSFC),Headquarters (HQ)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement (IA) Between NASA and German Aerospace Center (DLR) for Cooperation on the Collaborative Effort for Digital Beamforming Synthetic Aperture Radar Studies (CoSAR)	Project-Specific Agreement (PSA)	This IA is for NASA and DLR to collaborate on studies related to synthetic aperture radar. It is an IA under the NASA-DLR Framework Agreement.	24-Oct-16	31-Mar-20
427	Headquarters (HQ),Jet Propulsion Laboratory (JPL)	The Ministry of Economy and Competiveness of Spain, The Ministry of Industry Energy and Tourism of Spain, The Center for the Development of Industrial Technology, The National Institute for Aerospace	Spain (SP)	Memorandum of Understanding (MOU): Mars 2020 Mars Environmental Dynamics Analyzer (MEDA) Memorandum of Understanding (MOU)	Project-Specific Agreement (PSA)	Memorandum of Understanding (MOU) between NASA and the Ministry of Economy and Competitiveness of Spain, the Ministry of Industry Energy and Tourism of Spain, the Center for the Development of Industrial Technology, and the National Institute for Aerospace Technology 'Esteban Terradas' of Spain; Concerning the Mars Environmental Dynamics Analyzer Instrument for the Mars 2020 Mission.	25-Oct-16	30-Jun-24
428	Johnson Space Center (JSC)	Canadian Space Agency (CSA)	Canada (CA)	Implementing Arrangement (IA) Between NASA and Canadian Space Agency (CSA) for the Evaluation of a Wearable Biosensor Monitoring System	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) Between NASA and CSA on collaboration to evaluate the capabilities of the biosensor monitoring system and supporting technologies and explore its integration into a test demonstration.	26-Oct-16	26-Oct-19
429	George C. Marshall Space Flight Center (MSFC)	Korea Meteorological Administration (KMA)	Korea, Republic of (KS)	Agreement Between NASA and the Korea Meteorological Administration (KMA) for Meteorological Research Cooperation the Joint NASA-JAXA Global Precipitation (GPM)	Project-Specific Agreement (PSA)	NASA and the Korea Meteorological Administration will cooperate on ground validation of Global Precipitation Measurement (GPM) mission precipitation estimates and improved understanding of physical processes associated with snow and other forms of frozen and mixed-phase precipitation.	2-Nov-16	2-Nov-21

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
430	Langley Research Center (LaRC)	European Transonic Windtunnel GmbH (ETW)	Germany (GM)	Agreement Between NASA and the European Transonic Windtunnel GmbH (ETW) on Balance Collaboration Data at the ETW	Implementing Arrangement/Agreement (IA)	The purpose of this collaboration is to document a common understanding for coordination of the Parties' activities to acquire new balance calibration data and compare it with existing calibration data. In 2010, a new model, the common research model was tested in the National Transonic Facility (NTF) with data being obtained at both low and high Reynolds numbers. In 2014, the CRM was also tested at the ETW. As part of the agreement at that time, both sets of data were shared between NTF and ETW. While analyzing this data, both ETW and NTF personnel discovered some unusual differences between the two datasets which led to a more detailed investigation of the data, which included looking at the calibration data of the balance used at NTF and the one used at ETW to determine if the differences may be a result of different balances being used during the two tests. This agreement allows for the balance used in the NTF (the NTF 118A) to have a calibration performed in the ETW automated calibration system which would provide knowledge that could help clarify if the balances were the cause of the differences.	14-Nov-16	31-Dec-20
431	Headquarters (HQ),Jet Propulsion Laboratory (JPL)	Indian Space Research Organization (ISRO)	India (IN)	RapidScat - ScatSat-1	Implementing Arrangement/Agreement (IA)	NASA and Indian Space Research Organization (ISRO) will cooperate on calibration and validation of data from the NASA ISS Rapid Scatterometer and the ISRO ScatSat-1 Scatterometer.	15-Nov-16	15-Nov-21
432	Johnson Space Center (JSC)	Italian Space Agency (ASI)	Italy (IT)	Reimbursable Space Act Agreement Between NASA and the Italian Space agency (ASI) for Crew Support Services	Project-Specific Agreement (PSA)	Crew support services for ESA Italian Astronaut Paolo Nespoli for his ISS increment flight. these reimbursable services provided by NASA include training crew support services, medical crew support services, administrative and IT services, and Russian training integration instructor services.	17-Nov-16	31-Dec-20
433	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Amendment 4: Solar Terrestrial Relations Observatory (STEREO)	Project-Specific Agreement (PSA)	Amendment 4: The National Centre for Space Studies (CNES) will provide STEREO/Wind/Radio and Plasma Wave Experiment (S/WAVES) instrument suite. Co-Is were selected to provide portions of instruments for SECCHI and IMPACT suites.	30-Nov-16	31-Dec-20
434	Goddard Space Flight Center (GSFC)	Universidad Popular de Cesar (UPC)	Colombia (CO)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and Universidad Popular del Cesar (UPC) will cooperate on the operation of an AERONET sun photometer station and/or Lidar stations located at UPC. UPC will maintain the NASA-owned instrument, and NASA will provide calibration on that instrument.	30-Nov-16	29-Nov-26

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
435	Johnson Space Center (JSC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Extension to Implementing Arrangement (IA): The Alendronate - Zoledronate Experiment	Implementing Arrangement/Agreement (IA)	Extension of original Letter of Arrangement (LOA). NASA/JAXA Agreement on a joint study of 'Bisphosphonates as a Countermeasure to Space Flight Induced Bone Loss' (NASA objective) and 'Pre-flight Zoledronate Infusion as an Effective Countermeasure for Spaceflight-Induced Bone Loss and Renal Stone Formation' (JAXA experiment). Joint study referred to as '(the Alendronate - Zoledronate experiment'). The objective of this experiment is to determine whether bisphosphonates, in conjunction with the routine in-flight exercise program, will protect International Space Station (ISS) crew members from the regional decreases in bone mineral density documented on previous ISS flights. The pre-flight, inflight, and post-flight activities regarding the Alendronate - Zoledronate experiment will be covered by an arrangement among the Canadian Space Agency, the European Space Agency, NASA of the United States, and Japan Aerospace Exploration Agency concerning International Space Life Sciences flight experiments on the International Space Station (ISS) (hereinafter referred to as 'the Arrangement') which went into effect on September 30, 2002, (SIERA # MULT-0008-0).	5-Dec-16	31-Dec-19
436	All NASA Centers	Canadian Space Agency (CSA)	Canada (CA)	Amendment and Extension 9: Mars Exploration Program	Project-Specific Agreement (PSA)	Amendment and Extension 9 of an existing Mars cooperation agreement.	9-Dec-16	31-Dec-21
437	Johnson Space Center (JSC)	Plymouth University	United Kingdom (UK)	International Hayabusa Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Natasha Stephen of Plymouth University in Plymouth, UK, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Hayabusa Sample Curator).	12-Dec-16	12-Dec-21
438	Johnson Space Center (JSC)	Woodside Engineering Technologies PTY LTD.	Australia (AS)	Reimbursable Space Act Umbrella Agreement Between NASA and Woodside Energy Technologies Pty Ltd. Regarding Anthropomorphic Robotic Systems	Umbrella/Framework Agreement (UM/FW)	NASA will provide reimbursable support to Woodside related to their use of NASA anthropomorphic robotic systems.	14-Dec-16	14-Dec-21
439	Johnson Space Center (JSC)	Woodside Engineering Technologies PTY LTD.	Australia (AS)	Reimbursable Space Act Agreement: Annex 1: Between NASA and Woodside Energy Technologies Pty Ltd. Regarding Anthropomorphic Robotic Systems	Umbrella/Framework Agreement (UM/FW)	NASA will deliver a Robonaut 2 system for an initial loan period of one year.	14-Dec-16	14-Dec-21
440	Jet Propulsion Laboratory (JPL)	European Organization for the Exploitation of Meteorological Satellites (EUMETSAT),European Space Agency (ESA)	Multiple Signatories	Sentinel-6/Jason-CS	Project-Specific Agreement (PSA)	Cooperation on development and launch of the Sentinel-6/Jason-CS mission.	14-Dec-16	31-Dec-40
441	Goddard Space Flight Center (GSFC)	Swiss Space Office (SSO)	Switzerland (SZ)	Solar Terrestrial Relations Observatory (STEREO)	Project-Specific Agreement (PSA)	Dr. Robert Wimmer-Schweingruber selected as Co-I on the PLAsma and Supra Thermal Ion Composition (PLASTIC) instrument suite on STEREO.	16-Dec-16	31-Dec-20
442	All NASA Centers	European Space Agency (ESA)	European Space Agency (ESA)	Advanced Telescope for High Energy Astrophysics (ATHENA) X-Ray Astronomy Mission Joint Study	Project-Specific Agreement (PSA)	Joint Study regarding possible NASA participation in ESA's Advanced Telescope for High Energy Astrophysics (ATHENA) X-Ray Astronomy Mission.	20-Dec-16	21-Dec-21
443	Goddard Space Flight Center (GSFC)	European Space Agency (ESA)	European Space Agency (ESA)	Amendment 5: Cooperation Under Solar Terrestrial Science Programme (STSP) (CLUSTER I and SOHO)	Project-Specific Agreement (PSA)	Amendment 5: The Solar Terrestrial Science Programme (STSP) is composed of two missions: Cluster and SOHO. The combination will enhance the scientific return beyond the objectives of the individual missions. Cluster mission is to investigate small-scale structure in the Earth's plasma environment. Spacecraft SOHO - Solar and Heliospheric Observatory mission is developed by ESA to develop the launch of Ariane V. Expiration date was one year past nominal mission (Dec 2, 1998), but due to mission problems and loss of Cluster, agreement was in limbo until formally extended on Jan 16, 2003.	20-Dec-16	31-Dec-21

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
444	Jet Propulsion Laboratory (JPL)	European Space Agency (ESA)	European Space Agency (ESA)	Amendment 1: Memorandum of Understanding (MOU) Between NASA and European Space Agency (ESA) Concerning the Euclid Mission	Project-Specific Agreement (PSA)	Amendment 1: Memorandum of Understanding (MOU) between NASA and ESA to continue cooperation on the ESA-led Euclid astrophysics mission under a MOU that entered into force on January 10, 2013. The amendment covers the management of Euclid science operations and data archives, including the integration of the NASA-provided Science Data Center (SDC-US); the selecting of other NASA-funded collaborators including the U.S. Lead Scientist, the provision and operation of the Euclid NASA Science Center, and the conducting of qualification and evaluation activities for the NISP. MOU covering NASA-ESA cooperation on the ESA-led Euclid astrophysics mission. Covers NASA provision of the Near Infrared Spectrograph and Photometer (NISP) instrument sensor chip system.	20-Dec-16	1-Jul-25
445	Headquarters (HQ)	European Space Agency (ESA)	European Space Agency (ESA)	NASA and European Space Agency (ESA) in Cooperation on the ESA-led Advanced Telescope for High-Energy Astrophysics (ATHENA) X-ray Astronomy Mission	Project-Specific Agreement (PSA)	NASA and ESA will cooperate on the ESA-led ATHENA X-ray Astronomy Mission. ATHENA will address the theme "Hot and Energetic Universe." Two instruments are currently envisaged for the ATHENA mission, the X-ray Integral Field Unit (X-IFU), a high resolution spectrograph, and the Wide Field Imager (WFI). Following the selection, ESA assembled a Science Study Team (SST) to initiate the required study activities during the Assessment Phase of the ATHENA mission.	21-Dec-16	21-Dec-21
446	Goddard Space Flight Center (GSFC)	German Aerospace Center (DLR)	Germany (GM)	Amendment: Solar Terrestrial Relations Observatory (STEREO) Mission	Project-Specific Agreement (PSA)	Amendment: STEREO will address the origin, evolution, and interplanetary consequences of Coronal Mass Ejections (CMEs). This is the first program to look at the Sun in three dimensions.	23-Dec-16	31-Dec-20
447	Goddard Space Flight Center (GSFC),Jet Propulsion Laboratory (JPL)	Indian Space Research Organization (ISRO)	India (IN)	GPM-Megha Tropiques Implementing Arrangement (IA) with Indian Space Research Organization (ISRO)	Implementing Arrangement/Agreement (IA)	GPM-Megha Tropiques Implementing Arrangement (IA) under the NASA-ISRO Framework Agreement for cooperation between NASA and the Indian Space Research Organisation (ISRO) on the Global Precipitation Measurement and Megha-Tropiques missions.	26-Dec-16	31-Dec-20
448	Headquarters (HQ),Johnson Space Center (JSC)	Korea Aerospace Research Institute (KARI)	Korea, Republic of (KS)	Implementing Arrangement Between NASA and Korea Aerospace Research Institute (KARI) for Cooperation on the Korea Pathfinder Lunar Orbiter (KPLO) Mission	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) with NASA/Korea where NASA provides instruments for integration into KARI's lunar orbiter. NASA will also provide mission design and navigation support.	30-Dec-16	31-Dec-23
449	Johnson Space Center (JSC)	Centre National De La Recherche Scientifique	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Maud Boyet, France, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	5-Jan-17	5-Jan-22
450	Johnson Space Center (JSC)	Museum National d'Histoire Naturelle	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Brigitte Zanda, France, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	5-Jan-17	5-Jan-22
451	Johnson Space Center (JSC)	University Museum of the University of Tokyo	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Takafumi Niihara, Japan, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	5-Jan-17	5-Jan-22

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
452	Johnson Space Center (JSC)	University of Lausanne	Switzerland (SZ)	International Lunar Sample Loan Agreement	Project-Specific Agreement (PSA)	Pierre Vonlanthen of the University of Lausanne proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	5-Jan-17	5-Jan-22
453	Johnson Space Center (JSC)	University of Manchester	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Torsten Henkel, UK, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	5-Jan-17	5-Jan-22
454	Johnson Space Center (JSC)	University of Cambridge	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	James Bryson, UK, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	5-Jan-17	5-Jan-22
455	George C. Marshall Space Flight Center (MSFC)	European Space Agency (ESA)	European Space Agency (ESA)	Jupiter Icy Moons Explorer (JUICE) Mission - UVS	Implementing Arrangement/Agreement (IA)	NASA will provide the Ultraviolet Spectrograph (UVS) instrument for the ESA JUICE Mission, as well as ground network support.	18-Jan-17	30-Jun-34
456	George C. Marshall Space Flight Center (MSFC)	Environment Canada	Canada (CA)	Amendment 3: Cooperation in the Global Precipitation Measurement (GPM) Cold-Season Precipitation Validation Experiment (GCPEX) Project	Project-Specific Agreement (PSA)	Amendment 3: Parties will conduct the project using instrumented NASA DC-8 and NASA-funded University of North Dakota Citation aircraft for flights over ground sites located in and around the Environment Canada Centre for Atmospheric Research Experiments site in Egbert, Ontario. Ground-based equipment to measure precipitation will also be used.	30-Jan-17	31-Jan-22
457	Goddard Space Flight Center (GSFC)	Agentur fur Luft- und Raumfahrt (ALR, Aeronautics and Space Agency),Austrian Space Agency (ASA)	Austria (AU)	Extension 3: Temporal History of Events and Macroscale Interactions During Substorms (THEMIS)	Project-Specific Agreement (PSA)	Extension 3: NASA and the Aeronautics and Space Agency (FFG/ALR) of the 'sterreichische Forschungsf'rderungsgesellschaft mbH, or Austrian Research Promotion Agency, formerly the Austrian Space Agency (ASA), have been cooperating on the THEMIS mission, which launched on February 17, 2007. This unique constellation of satellites has provided scientists with data to help resolve how Earth's magnetosphere stores and releases energy from the Sun by triggering geomagnetic substorms. THEMIS aims to determine what physical process in near-Earth space initiates the violent eruptions of the aurora that occur during substorms in the Earth's magnetosphere. FFG/ALR is responsible for the development and testing of the Fluxgate Magnetometer Electronics (FGE). THEMIS is a 2-year mission consisting of 5 identical probes that will study the violent colorful eruptions of Auroras. Three of the remaining THEMIS satellites continue to study substorms that are visible in the northern hemisphere as aurora borealis.	2-Feb-17	31-Dec-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
458	Goddard Space Flight Center (GSFC)	Agentur fur Luft- und Raumfahrt (ALR, Aeronautics and Space Agency),Austrian Space Agency (ASA)	Austria (AU)	Amendment 4: Temporal History of Events and Macroscale Interactions During Substorms (THEMIS)	Project-Specific Agreement (PSA)	Amendment 4: NASA and the Aeronautics and Space Agency (FFG/ALR) of the 'sterreichische Forschungsf'rderungsgesellschaft mbH, or Austrian Research Promotion Agency, formerly the Austrian Space Agency (ASA), have been cooperating on the THEMIS mission, which launched on February 17, 2007. This unique constellation of satellites has provided scientists with data to help resolve how Earth's magnetosphere stores and releases energy from the Sun by triggering geomagnetic substorms. THEMIS aims to determine what physical process in near-Earth space initiates the violent eruptions of the aurora that occur during substorms in the Earth's magnetosphere. FFG/ALR is responsible for the development and testing of the Fluxgate Magnetometer Electronics (FGE). THEMIS is a 2-year mission consisting of 5 identical probes that will study the violent colorful eruptions of Auroras. Three of the remaining THEMIS satellites continue to study substorms that are visible in the northern hemisphere as aurora borealis.	2-Feb-17	31-Dec-20
459	Headquarters (HQ)	Manila Observatory of the Philippines	Philippines (RP)	Memorandum of Understanding (MOU) Between NASA and the Manila Observatory for Cooperation on the Cloud Aerosol Monsoon Processes Philippines Experiment (CAMP2EX)	Project-Specific Agreement (PSA)	Memorandum of Understanding (MOU): Airborne Science Mission to study influence of natural and anthropogenic aerosol particles on cloud properties and precipitation as well as consequent impact on weather and climate in the Philippines, using the NASA P-3 research aircraft.	3-Feb-17	30-Nov-22
460	Johnson Space Center (JSC)	Canadian Space Agency (CSA)	Canada (CA)	Implementing Arrangement (IA) Between NASA and Canadian Space Agency (CSA) Concerning the Exchange of Goods and Services in Support of the International Space Station (ISS) Including the Offset of CSA's Responsibility for Common System Operations Costs (CSOC) for 2016-2020	Implementing Arrangement/Agreement (IA)	This Implementing Arrangement (IA) includes a balance exchange of goods and services including Canadian Space Agency's (CSA) offset of Common System Operations Costs (CSOC) and NASA providing crew support services, conditioned stowage and office space.	7-Feb-17	31-Dec-20
461	All NASA Centers	Agencia Espacial Mexicana (AEM),Direccion General de Television Educativa (DGTVE)	Mexico (MX)	Nonreimbursable Space Act Agreement Between NASA and The Agencia Espacial Mexicana (AEM) and The Direccion General De Television Educativa (DGTVE) of the United Mexican States for Collaboration on Translating and Disseminating ISS News and Activities	Project-Specific Agreement (PSA)	This agreement will be for the purpose of translating into Spanish all NASA "Space to Ground" video segments that air on NASA TV and are webcast as well. DGTVE will provide the production necessities, with AEM aiding with the translation process. AEM and DGTVE then plan to disseminate the Spanish version of the program through public and private media sectors in Mexico, Latin America, Spain, and the U.S. to reach a more broad and diverse audience of non-English speakers.	13-Feb-17	31-Oct-19

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
462	Headquarters (HQ)	Canadian Space Agency (CSA)	Canada (CA)	Amendment 2: Implementing Arrangement (IA) Between NASA and Canadian Space Agency (CSA) for Cooperation on the Cloudsat Mission	Implementing Arrangement/Agreement (IA)	Amendment 2: CloudSat improves climate and numerical weather prediction models by validating cloud predictions in these models. The information that CloudSat provides is the vertical distribution of cloud systems, including profiles of ice and water contents. CloudSat provides significantly improved profiles of radiative heating of the atmosphere by clouds. The original agreement was signed on September 14, 2005, to address the development, launch, and initial acquisition and distribution of data. This IA which amends and extends the original agreement commits NASA to continue CloudSat spacecraft operations, including operation of the sole instrument, the jointly developed Cloud Profiling Radar (CPR) and provide scientific data to the Canadian science team. CSA will provide engineering support for the 94 GHz Extended Interaction Klystrons (EIKs) during on-orbit operations of the Cloud Profiling Radar (CPR) and maintain contact with Canadian members of the CloudSat science team, providing support to them for CloudSat science activities, as required.	17-Feb-17	31-Dec-20
463	Ames Research Center (ARC)	United Arab Emirates Space Agency (UAESA)	United Arab Emirates (AE)	Reimbursable Space Act Agreement Between NASA and The United Arab Emirates Space Agency (UAESA) for Participation in the NASA International Internship (I^2) Program	Project-Specific Agreement (PSA)	This agreement enables UAE Space Agency participation in the NASA International Internship Program (NASA I^2), designed to provide a collaborative environment where U.S. interns (university undergraduate students) or fellows (university graduate students) can interact and work alongside international peers on research opportunities.	26-Feb-17	1-Aug-19
464	Jet Propulsion Laboratory (JPL)	European Space Agency (ESA)	European Space Agency (ESA)	Amendment 1: Memorandum of Understanding (MOU) Between NASA and European Space Agency (ESA) Concerning the 2016 ExoMars Mission	Project-Specific Agreement (PSA)	Amendment 1: Memorandum of Understanding (MOU) to allow NASA to provide aerobraking and Deep Space Network (DSN) support to ESA's ExoMars Trace Gas Orbiter (EM/TGO), while allowing EM/TGO to eventually act as a data relay orbiter for NASA's landed Mars assets.	1-Mar-17	31-Dec-23
465	Headquarters (HQ),Wallops Flight Facility (WFF)	National Centre for Space Studies (CNES)	France (FR)	Implementing Arrangement (IA) Between NASA and National Centre for Space Shuttle Studies (CNES) on Cooperation on the Polarized Instrument for Long Wavelength Observation of the Tenuous Interstellar Medium (PILOT) Balloon-Borne Experiment	Implementing Arrangement/Agreement (IA)	NASA and CNES plan to coordinate the use of NASA-operated facilities in Alice Springs. Australia to facilitate a CNES-led ballooning campaign, planned for the 2017 calendar year.	3-Mar-17	3-Mar-21
466	Glenn Research Center at Lewis Field (GRC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Computational Modeling of Cryogenic Fluids	Project-Specific Agreement (PSA)	NASA and JAXA process pre-defined "test case" cryogenic scenarios through their individual Computational Fluid Dynamics (CFD) codes, and then compare the results. The purpose is for both parties to advance their respective cryogenic propellant management capabilities.	9-Mar-17	30-Sep-19
467	Goddard Space Flight Center (GSFC),Jet Propulsion Laboratory (JPL)	European Space Agency (ESA)	European Space Agency (ESA)	Agreement Between the European Space Agency (ESA) and NASA Concerning Network and Operations Cross Support	Project-Specific Agreement (PSA)	This agreement provides for a legal framework and the conditions for a mutually beneficial long-term cooperation between NASA and ESA in the areas of network and operations cross support. This includes telemetry data acquisition, tracking, and command. This agreement provides for implementing arrangements to be completed for mission specific activities. This Agreement supersedes and terminates ESA-0239-0, -1, and -2.	20-Mar-17	21-Mar-27

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
468	Langley Research Center (LaRC)	The University of Queensland	Australia (AS)	Amendment and Extension 1: Non-Reimbursable International Space Act Agreement Between NASA and The University of Queensland (UQ) for Study in Radiative Heating in Strongly Expanding Flows for Planetary Exploration Applications	Project-Specific Agreement (PSA)	Amendment and Extension 1: Conduct research utilizing the Australian shock tunnel facilities to investigate transitional and turbulent flow using generic vehicle shapes. The purpose of this work is to study the radiation spectra from a region of rapidly expanding flow representative of the passage of the shock layer on a re-entry capsule from the windward to leeward surfaces. This work will improve models of radiation energy transfer in vehicles entering planetary atmospheres at super-orbital entry velocities. These results inform spacecraft designers on the entry environments associated with rapidly expanding flow for vehicles returning from the Moon or beyond. Successful Mars missions and the eventual Entry, Descent and Landing for vehicles returning from Mars at super-orbital velocities must minimize spacecraft weight while satisfying overall system and payload requirements.	23-Mar-17	30-Jun-20
469	Headquarters (HQ),Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Italy (IT)	NASA-Italian Space Agency (ASI) Sardinia Radio Telescope Letter of Agreement (LOA)	Project-Specific Agreement (PSA)	This interim Agreement is intended to cover the planned Sardinia Radio Telescope (SRT) modification and mission support activities between NASA and ASI, including tracking and telemetry data acquisition as well as system validation and mission operations. Upon implementation of this Agreement, the Parties' planned cooperation will be further defined in an Implementing Arrangement (IA), under the auspices of the 'Framework Agreement Between the Government of the United States of America and the Government of the Italian Republic for Cooperation in Aeronautics and the Exploration and Use of Outer Space for Peaceful Purposes', which will supersede this agreement.	23-Mar-17	23-Mar-22
470	Headquarters (HQ)	Government of the Russian Federation	Russia (UR)	Extension 4: Agreement Between the Governments of the United States of America and the Russia Federation Concerning the Procedure for the Customs Documentation and Duty-Free Entry of Goods Transported within the Framework of U.S.-Russian Cooperation in the Exploration and Use of Space for Peaceful Purposes	Umbrella/Framework Agreement (UM/FW)	Extension 4: Diplomatic Note. Extends Agreement for an additional five-year period. Effective date retroactive to Aug 26, 2016, specified in the dip note, extending agreement to Aug 26, 2021. Provides the procedure for customs documentation and duty-free entry of goods transported under agreements entered into under the Agreement between the U.S. and Russia concerning cooperation in the exploration and use of space for peaceful purposes and agreements for cooperation on the International Space Station.	24-Mar-17	26-Aug-21
471	Headquarters (HQ)	LEGO System A/S	Denmark (DA)	Extension 1 of the Non-Reimbursable Space Act Umbrella Agreement Between NASA and LEGO System A/S of Denmark for Cooperation in Ground-Based and Aeronautics Activities	Umbrella/Framework Agreement (UM/FW)	Extension 1 of the Non-Reimbursable Space Act Umbrella Agreement Between NASA and LEGO System A/S of Denmark for Cooperation in Ground-Based and Aeronautics Activities. NASA and LEGO will extend the agreement for an additional five (5) years, as described in the March 30, 2017, letter. The extension will take effect from April 6, 2017, and remain in effect until April 10, 2022. NASA also proposes under the Article that the points of contacts for both NASA and LEGO, "Management Points of Contact," be updated and replaced with the following name, Ms. Maureen Ryan O'Brien, Manager, Strategic Alliances.	6-Apr-17	10-Apr-22
472	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	France (FR)	Amendment: Implementing Arrangement (IA) Between NASA and the National Centre for Space Studies (CNES) for Cooperation on Global Precipitation Measurement (GPM) and Megha-Tropiques	Implementing Arrangement/Agreement (IA)	Amendment: Implementing Arrangement (IA) to provide data and calibration/validation cooperation between NASA and CNES on the U.S./Japan Global Precipitation Measurement (GPM) mission and French/Indian Megha-Tropiques mission.	21-Apr-17	31-Dec-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
473	Headquarters (HQ)	Indian Space Research Organization (ISRO)	India (IN)	Implementing Arrangement (IA) Between NASA and Indian Space Research Organization (ISRO) for Exchange of Personnel Under the Professional Engineer and Scientist Exchange Program (PESEP)	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) for cooperation on the Professional Engineer and Scientist Exchange Program (PESEP) established by the India-U.S. Civil Space Joint Working Group.	25-Apr-17	25-Apr-27
474	Goddard Space Flight Center (GSFC)	The University Court of the University of Edinburgh	United Kingdom (UK)	Mini-LHR GreenNet with the University of Edinburgh	Project-Specific Agreement (PSA)	NASA to loan instruments for a University of Edinburgh ground station. The parties will establish one or more mini-LHR stations at mutually agreed sites. University of Edinburgh will host the NASA-owned equipment.	26-Apr-17	25-Apr-27
475	Headquarters (HQ)	Polar Knowledge Canada (POLAR)	Canada (CA)	Amendment 1: Agreement Between NASA and Polar Knowledge Canada for Cooperation in the Arctic Boreal Vulnerability Experiment (ABOVE)	Project-Specific Agreement (PSA)	Amendment 1: NASA and Polar Knowledge Canada will cooperate to study how social-ecological systems in high northern latitude regions of northwestern North America are responding and feeding back to environmental and social change.	28-Apr-17	25-May-21
476	Langley Research Center (LaRC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Amendment: Sonic Boom Research: To Formalize Conducting Research into Methods for Modeling the Response of Residential and Commercial Building Structures to Sonic Boom Disturbances and the Resulting Human Response to the Noise Heard Inside the Structures	Project-Specific Agreement (PSA)	Amendment 3: Parties will research sonic boom variability due to atmospheric turbulence effects and assess the resulting human response to the sonic boom noise. Amendment 2: The purpose of the cooperation is to address the following aspects of sonic boom modeling: advancement of equalization methods for boom simulators; trading data and/or modeling of NASA risk reduction tests and the JAXA Vibro-Acoustic Device; modeling and numerical simulation of the vibro-acoustic response of buildings and building components due to simulated and actual sonic boom exposure (for both laboratory and field test articles); and exchanging recordings of and methods for recording rattle for playback in simulators. In the longer term, NASA and JAXA will investigate the possibility of using each organization's sonic boom simulators to conduct joint studies. The Parties will also consider pursuing future collaboration including investigating the use of boom simulators for evaluation of human response to sonic booms experienced indoors. Amendment 1: The purpose of the cooperation is to address the following aspects of sonic boom modeling: advancement of equalization methods for boom simulators; trading data and/or modeling of NASA risk reduction tests and the JAXA Vibro-Acoustic Device; modeling and numerical simulation of the vibro-acoustic response of buildings and building components due to simulated and actual sonic boom exposure (for both laboratory and field test articles).	28-Apr-17	1-May-22
477	Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Amendment 1: Implementing Arrangement (IA) Between NASA and German Aerospace Center (DLR) for Cooperation on the Interior Exploration Using Seismic Investigations, Geodesy, and Heat Transport (InSIGHT) Mission	Implementing Arrangement/Agreement (IA)	Amendment to reflect the InSIGHT mission's new May 2018 launch date. DLR is providing the Heat Flow and Physical Properties Package (HP3) instrument for the NASA InSIGHT mission, slated for launch in 2016.	28-Apr-17	30-Jun-22
478	Johnson Space Center (JSC)	Western University	Canada (CA)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Roberta Flemming, Western University, Canada, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	3-May-17	3-May-22

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
479	Johnson Space Center (JSC)	Laboratoire de Geologie de Lyon, ENS Lyon/CNRS	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Bernard Bourdon of Laboratoire de Geologie de Lyon, ENS Lyon/CNRS, Lyon cedex, France, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	3-May-17	3-May-22
480	Johnson Space Center (JSC)	University of Goettingen	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Andrea Patzer, University of Goettingen, Germany, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	3-May-17	3-May-22
481	Johnson Space Center (JSC)	Universita' degli Studi di Padova	Italy (IT)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Matteo Massironi of Universita' degli Studi di Padova, Italy, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	3-May-17	3-May-22
482	Headquarters (HQ)	National Institute of Information and Communications Technology (NICT)	Japan (JA)	Joint Study Regarding Potential Cooperation Between NASA and the National Institute of Information and Communications Technology (NICT) on Information and Communications Technology	Project-Specific Agreement (PSA)	NASA and NICT have expressed mutual interest in a cooperative agreement that will allow the two agencies to exchange non-ITAR and non-export-controlled meteorological data to perform collaborative analysis and research in the field of free space optical communications with the specific goal to support the joint development of concepts for the CCSDS Magenta Book on Atmospheric Characterization and Forecasting for Optical Link Operations.	23-May-17	23-May-22
483	Jet Propulsion Laboratory (JPL)	Mohammed Bin Rashid Space Centre (MBRSC)	United Arab Emirates (AE)	Reimbursable Space Act Agreement Between NASA and the Mohammed Bin Rashid Space Centre (MBRSC) for Deep Space Network (DSN) Support for Emirates Mars Mission	Project-Specific Agreement (PSA)	Provide deep space network (DSN) tracking and associated support in order to enable communications with the United Arab Emirates Space Agency's scientific robotic mission to Mars, named Al-Amal ('Hope'). JPL will assist the MBRSC by providing DSN support and scheduling services to United Arab Emirates Space Agency (UAESA)'s Al-Amal mission in order to further MBRSC's objectives of achieving Earth-to-Mars transfer orbit, cruise to Mars, Mars orbit entry and transfer of the received engineering and science data acquired by the mission's subsystems and science payload.	12-Jun-17	23-May-23
484	Headquarters (HQ)	The Republic of Seychelles	Seychelles (SE)	Republic of Seychelles Global Learning and Observations to Benefit the Environment (GLOBE) Cooperation	Project-Specific Agreement (PSA)	The GLOBE Program is an international environmental science and education program that brings students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community.	13-Jun-17	25-Aug-22
485	Ames Research Center (ARC)	Italian Space Agency (ASI)	Italy (IT)	Implementing Arrangement (IA) Between NASA and ASI for Associate Membership in the NASA Solar System Exploration Research Virtual Institute (SSERVI)	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) to enable ASI to join the NASA Solar System Exploration Research Virtual Institute (SSERVI) as an Associate Member. SSERVI is a virtual institute managed by the NASA Ames Research Center with a mission of advancing the field of solar system science as applied to human exploration. NASA and ASI will provide scientific and engineering expertise to enhance and propel the broad objectives of solar system science.	14-Jun-17	14-Jun-27

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
486	George C. Marshall Space Flight Center (MSFC),Goddard Space Flight Center (GSFC)	Italian Space Agency (ASI)	Italy (IT)	Implementing Arrangement (IA) Between NASA and Agencia Spaziale Italia (ASI) on the Imaging X-ray Polarimetry Explorer (IXPE) Mission	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) between NASA and the Italian Space Agency (ASI) cooperating on the Imaging X-ray Polarimetry Explorer (IXPE) Mission; and recalling terms of framework agreement between the Government of the United States of America and the Government of the Italian Republic of for cooperation in the Exploration and Use of Outer Space for Peaceful Purposes, signed March 19, 2013, and entered into force on February 11, 2016. IXPE is a Principal Investigator (PI)-managed, Small-class Explorer (SMEX) NASA Mission led by Dr. Martin C. Weisskopf at MSFC. The IXPE missions main objective is to understand the physics of the X-ray emission produced by neutron stars and black holes. IXPE will address this objective by imaging X-rays from celestial objects onto polarization-sensitive imaging X-ray detectors. This mission opens a new window on the Universe by extending X-ray polarization measurements to hundreds of objects. The IXPE observatory will consist of a spacecraft (S/C) bus and three X-ray mirror module assemblies/X-ray polarization-sensitive detector systems. NASA will have overall responsibility for the mission and will provide the in-house fabricated X-ray mirror modules. The polarization-sensitive focal plane detectors will be provided by ASI. These will be based on pioneering work on electron-tracking gas-pixel detectors carried out by IXPE Co-Investigators at INFN and INAF/IAPS.	20-Jun-17	1-Dec-26
487	Ames Research Center (ARC)	Victorian Space Science Education Center (VSSEC)	Australia (AS)	Amendment 1: Reimbursable Space Act Agreement Between NASA and the Victorian Space Science Education Center (VSSEC) for Participation in the NASA International Internship (NASA I^2) Program	Project-Specific Agreement (PSA)	Amendment 1: This Agreement is facilitating VSSEC's participation in NASA I^2, which is designed to provide a collaborative environment where U.S. & international interns interact and work alongside each other on research opportunities. This Reimbursable Space Act Agreement will be for the purpose of facilitating VSSEC's participation in the National Aeronautics and Space Administration International Internship Program designed to provide a collaborative environment where U.S. interns or fellows can interact and work alongside with international peers on research opportunities.	21-Jun-17	31-Dec-20
488	Headquarters (HQ)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Implementing Arrangement (IA): Agreement Between NASA and the Japan Aerospace Exploration Agency (JAXA) for Cooperation in Sharing of Safety Alert Information	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA): Sharing Safety Alert Information between NASA and JAXA.	22-Jun-17	15-Sep-21
489	Ames Research Center (ARC)	Korea Aerospace Research Institute (KARI)	Korea, Republic of (KS)	Amendment 1: Reimbursable Space Act Agreement Between NASA and the Korean Aerospace Research Institute (KARI) for Participation In The National Aeronautics And Space Administration International Internship Program (NASA I^2)	Project-Specific Agreement (PSA)	Amendment 1: This Amendment and Extension of the NASA-KARI Agreement is facilitating KARI's continued participation in NASA I^2, a project that provides a collaborative environment where U.S. & international interns interact and work together. This Reimbursable Space Act Agreement will be for the purpose of facilitating KARI's participation in the National Aeronautics and Space Administration International Internship Program designed to provide a collaborative environment where U.S. interns or fellows can interact and work alongside with international peers on research opportunities.	23-Jun-17	31-Dec-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
490	Ames Research Center (ARC)	Swedish National Space Board (SNSB)	Sweden (SW)	Amendment 1: Reimbursable Space Act Agreement Between NASA and the Swedish National Space Board (SNSB) for Participation in The National Aeronautics and Space Administration International Internship Program (NASA I^2)	Project-Specific Agreement (PSA)	Amendment 1: This amendment extends the agreement by 3 years and facilitates SNSB's participation in NASA I^2. SNSB will submit student nominations to NASA for possible placement in spring, summer, or fall internships at a NASA field center. This Reimbursable Space Act Agreement will be for the purpose of facilitating SNSB's participation in the National Aeronautics and Space Administration International Internship Program designed to provide a collaborative environment where U.S. interns or fellows can interact and work alongside with international peers on research opportunities.	26-Jun-17	31-Dec-20
491	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Amendment 1: Implementing Arrangement (IA) Between NASA and the National Centre for Space Studies (CNES) on the Seismic Experiment for Interior Structure (SEIS) Instrument for the Interior Exploration Using Seismic Investigations, Geodesy, and Heat Transport (InSight) Mission	Implementing Arrangement/Agreement (IA)	Amendment 1 to reflect the InSight mission's new May 2018 launch date. CNES will lead the international consortium providing the SEIS instrument to the InSight mission.	26-Jun-17	31-Dec-22
492	Ames Research Center (ARC)	Agency for Science, Innovation and Technology (MITA)	Lithuania (LH)	Amendment and Extension 1: Reimbursable Space Act Agreement Between NASA and the Agency for Science, Innovation and Technology for Participation in the National Aeronautics and Space Administration International Internship Program (NASA I^2)	Project-Specific Agreement (PSA)	Amendment and Extension 1 between NASA and MITA for participation in the NASA International Internship Project with all the amendments listed in a letter sent on June 5, 2017. This Reimbursable Space Act Agreement will be for the purpose of facilitating MITA's participation in the National Aeronautics and Space Administration International Internship Program designed to provide a collaborative environment where U.S. interns or fellows can interact and work alongside with international peers on research opportunities.	27-Jun-17	31-Dec-20
493	Headquarters (HQ)	Institute of Atmospheric Physics (IAP), as part of the Academy of Sciences of the Czech Republic (ASCR)	Czech Republic (CZ)	Amendment 1: Heliophysics Letter of Agreement (LOA) for Data Sharing with Czech Republic on the Radiation Belt Storm Probe (RBSP) Mission	Project-Specific Agreement (PSA)	Amendment 1: Agreement between NASA and the Institute of Atmospheric Physics (IAP), as part of the Academy of Sciences of the Czech Republic (ASCR), for collaboration in heliophysics and space weather to share data for new NASA missions, in particular the Radiation Belt Storm Probe (RBSP).	30-Jun-17	31-Dec-20
494	Jet Propulsion Laboratory (JPL)	Russian Federal Space Agency (Roskosmos)	Russia (UR)	Implementing Agreement (IA) Between NASA and the Federal Space Agency, the Russian Federation, on the Russian Dynamic Albedo of Neutrons (DAN) Investigation for the US Mars Science Laboratory (MSL)	Project-Specific Agreement (PSA)	This Implementing Agreement (IA) between the U.S. NASA and the Federal Space Agency, the Russian Federation, on the Russian Dynamic Albedo of Neutrons (DAN) Investigation for the US Mars Science Laboratory (MSL) covers Russian provision of the DAN instrument for the MSL mission.	30-Jun-17	31-Dec-20
495	Johnson Space Center (JSC)	University College London	United Kingdom (UK)	Agreement Between NASA and The University College London (UCL) for Cooperation on Li-ion Battery Design	Project-Specific Agreement (PSA)	NASA and The University College London (UCL) in the United Kingdom will establish a cooperative agreement to advance an understanding of the relationship between Lithium ion (Li-ion) cell design and thermal runaway phenomena, which can lead to overheating and fire. This collaboration will guide safer battery designs, namely those features that mitigate the hazard of single cell thermal runaway, with potentially wide spectrum of future applications, including automobiles, aircraft and human spaceflight. NASA is conducting research aimed at developing thermal runaway propagation prevention measures in Li-ion battery pack designs, an area of interest to UCL. Meanwhile, among UCL Li-ion battery research interests is the performance of internal short circuit devices in simulating manufacturing defects, which can contribute to thermal runaway behaviors. UCL also has access to synchrotron facilities which provides additional means to acquire, reduce, and analyze in-situ high speed video X-rays of cells during thermal runaway.	5-Jul-17	5-Jul-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
496	Jet Propulsion Laboratory (JPL)	Swedish Institute of Space Physics (IRF)	Sweden (SW)	Amendment: Analyzer of Space Plasmas and Energetic Atoms (ASPERA) ASPERA-3 on Mars Express/ASPERA-4 on Venus Express	Project-Specific Agreement (PSA)	This is an amendment and extension of the existing agreement with the Swedish Institute of Space Physics (IRF) for cooperation on the Analyzer of Space Plasmas and Energetic Atoms (ASPERA) version 3. NASA will provide the Electron Spectrometer and a subassembly for the Ion Mass Analyzer Detector, which will be integrated into ASPERA-3. ASPERA-3 will use energetic neutral atom imaging to visualize the charged and neutral gas environments around Mars. Agreement amended to update points of contact and extend until December 31, 2021. Agreement amended to include ASPERA 4 on Venus Express and extend the agreement by 1 additional year.	5-Jul-17	31-Dec-21
497	Langley Research Center (LaRC)	German Aerospace Center (DLR)	Germany (GM)	Amendment 1: Implementing Arrangement (IA) Between NASA and the German Aerospace Center (DLR) for Data Exchange Cooperation Related to the Physical Behavior of Shell Structures	Implementing Arrangement/Agreement (IA)	Amendment 1: The Implementing Arrangement (IA) falls under the DLR Framework Agreement. Cooperation on research related to the development and validation of new analysis-based design methods for buckling critical launch vehicle aerospace structures and exchange data related to the fundamental physical behavior of these structures. NASA will share data results from NASA's Shell Buckling Knockdown Factor Project (SBKF) and DLR will share data results from a Consortium funded by the European Union referred to as, "New robust DESign Guideline for Imperfection Sensitive Composite Structures (DESICOS). The Parties will communicate at least quarterly, meet at an annual workshop annually, and produce a final report resulting from the cooperation.	10-Jul-17	31-Dec-20
498	Ames Research Center (ARC)	European Space Agency (ESA)	European Space Agency (ESA)	Amendment and Extension 1: Reimbursable Space Act Agreement Between NASA and the European Space Agency (ESA) for Participation in the NASA International Internship (NASA I^2) Program	Project-Specific Agreement (PSA)	Amendment and Extension 1: This Amendment and Extension of the NASA-ESA Agreement is facilitating ESA's continued participation in NASA I^2, a project that provides a collaborative environment where U.S. & international interns interact and work together. This agreement allows ESA to nominate students from ESA Member States for S&T internships at NASA field centers, starting in spring, summer or fall. Interns are to complete a minimum of 10 weeks. ESA will pay a small weekly fee to NASA for each of its interns, to help offset NASA project implementation costs. NASA I^2 is a project under the Office of Education's NASA Internships, Fellowships, and Scholarships (NIFS) Line of Business.	13-Jul-17	31-Dec-22
499	Johnson Space Center (JSC)	University of Coimbra	Portugal (PO)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Rui Fausto of the University of Coimbra in Portugal proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	19-Jul-17	19-Jul-22
500	Johnson Space Center (JSC)	Lund University	Sweden (SW)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Paul Lindgren of Lund University in Lund, Sweden proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	19-Jul-17	19-Jul-22

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
501	Johnson Space Center (JSC)	Newcastle University	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Neil Gray of Newcastle University in the UK proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	19-Jul-17	19-Jul-22
502	Johnson Space Center (JSC)	The University Court of the University of St. Andrews	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Boris C. Laurent of The University Court of the University of St. Andrews in Scotland, UK, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	19-Jul-17	19-Jul-22
503	Headquarters (HQ),Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Italy (IT)	Implementing Arrangement (IA): NASA - Italian Space Agency (ASI) Cooperation on Interior Exploration using Seismic Investigations, Geodesy and Heat Transport (InSight) Mission	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) under US-Italy Framework. ASI contribution of a laser retro-reflector array to the NASA InSight lander.	20-Jul-17	30-Jun-22
504	Johnson Space Center (JSC)	Institut de Physique du Globe de Paris	France (FR)	International Lunar Sample Loan Agreement	Project-Specific Agreement (PSA)	Prof. Manuel Moreira of the Institut de Physique du Globe de Paris in Paris, France, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	24-Jul-17	31-Oct-22
505	Goddard Space Flight Center (GSFC)	Geoscience Australia	Australia (AS)	Amendment 4: Space Geodesy: Geodetic Cooperation/Satellite Laser Ranging	Project-Specific Agreement (PSA)	Amendment 4: Loan by NASA to AUSLIG of space geodetic equipment in exchange for data acquired by Geoscience Australia (GA) (formerly AUSLIG) stations.	25-Jul-17	31-Jul-22
506	Langley Research Center (LaRC)	Indian Space Research Organisation (ISRO)	India (IN)	Balloon Measurements of the Asian Tropopause Aerosol Layer (BATAL) Balloon Campaign	Implementing Arrangement/Agreement (IA)	Balloon measurements of the Asian Tropopause Aerosol Layer (BATAL) campaigns. NASA and ISRO to conduct annual summer campaigns in India from 2017-2020 to make balloon-based measurements of aerosols and clouds in the upper troposphere and lower stratosphere using a variety of instrumentation and balloon flight systems.	31-Jul-17	31-Jul-22
507	Langley Research Center (LaRC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Amendment 2: NASA-JAXA Airframe Noise Prediction Agreement	Project-Specific Agreement (PSA)	Amendment 2: The amendment will continue to address key gaps in the understanding and modeling of slat cover noise and extending that knowledge base to realistic slat configurations as well as to noise reduction concepts for slat noise. This cooperative effort will also provide vital data, which will aid the airframe noise research at both organizations and also support the global initiative focused on high fidelity simulations and measurements of airframe noise sources under the AIAA Workshop series on Benchmark Problems for Airframe Noise Computations (BANC). Amendment 1: The National Aeronautics and Space Administration (NASA) and the Japan Aerospace Exploration Agency (JAXA) will conduct research for physics-based prediction of airframe noise from civil aircraft. The primary aim of this activity will be to improve the knowledge of airframe noise sources and corresponding physical mechanisms by working on non-sensitive, fundamental high-lift devices (HLD) and/or landing gear (LG) configurations. NASA/JAXA will conduct research for physics-based prediction of airframe noise from civil aircraft. The primary aim of this activity will be to improve the knowledge of airframe noise sources and corresponding physical mechanisms by working on non-sensitive, fundamental high-lift-devices (HLD) and/or landing gear (LG) configurations.	1-Aug-17	1-Aug-22

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
508	Goddard Space Flight Center (GSFC)	Norwegian Mapping Authority (NMA)	Norway (NO)	Reimbursable Space Act Agreement Between NASA and Norwegian Mapping Authority (NMA) Concerning Cooperation on Space Geodesy	Project-Specific Agreement (PSA)	Space Geodesy: Norwegian Mapping Authority (NMA) will reimburse NASA for the installation of a next generation Satellite Laser Ranging (SLR) station in Ny-Alesund, Norway, above the arctic circle. NASA and NMA will cooperate to contribute to the Global Geodetic Observing System.	7-Aug-17	6-Aug-27
509	Johnson Space Center (JSC)	Cohu Experience Ltd. or Space Nation	Finland (FI)	Nonreimbursable Space Act Agreement Between NASA and Space Nation for Collaboration on the Space Nation Astronaut Program Mobile Application	Project-Specific Agreement (PSA)	This agreement is for the purpose of facilitating collaboration on the Space Nation Astronaut Program and the Program's mobile application in order to ensure reasonable depictions and references to NASA's civil space missions in the App, specifically the ISS and to facilitate better understanding of NASA's programs and missions by the worldwide public.	18-Aug-17	17-Aug-22
510	Johnson Space Center (JSC)	University of Winnipeg	Canada (CA)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	PI Edward Cloutis of The University of Winnipeg in Winnipeg, Canada, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	18-Aug-17	18-Aug-22
511	Johnson Space Center (JSC)	University of Bern	Switzerland (SZ)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	PI Klaus Mezger of the University of Bern in Bern, Switzerland, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	18-Aug-17	18-Aug-22
512	Headquarters (HQ)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Martian Moons eXploration (MMX) Mission	Project-Specific Agreement (PSA)	JAXA and NASA will conduct joint studies for the MMX mission, including science instruments (ie. neutron gamma ray spectrometer), and other contributions like testing or calibration in U.S. facilities.	7-Sep-17	31-Mar-22
513	Johnson Space Center (JSC)	Museum National d'Histoire Naturelle	France (FR)	International Stardust Samples Loan Agreement	Project-Specific Agreement (PSA)	Matthieu Gounelle of the Museum National d'Histoire Naturelle (MNHN) in Paris, France, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Stardust Sample Curator). *NASA Stardust Sample Curator: Michael Zolensky proposed the question concerning traveling with the stardust sample and entering Customs.	13-Sep-17	13-Sep-22
514	Johnson Space Center (JSC)	University of Manchester	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Rhian H. Jones of The University of Manchester in Manchester, U.K., proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	13-Sep-17	13-Sep-22
515	Ames Research Center (ARC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Implementing Arrangement (IA): NASA-JAXA Letter of Agreement on the Exchange of Rodent Tissues from ISS Rodent Missions	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA): NASA and JAXA both have rodent research programs utilizing the ISS. To maximize this research, NASA and JAXA have agreed to exchange rodent tissues at the discretion of each partner to determine available tissues.	14-Sep-17	31-Dec-20
516	Armstrong Flight Research Center (AFRC)	Space Research Organization of the Netherlands (SRON)	Netherlands, The (NL)	Reimbursable Space Act Agreement Between NASA and the Sron Netherlands Institute for Space Research for Airborne Science Research Using the Spectropolarimeter for Planetary Exploration Airborne Instrument- Space Research Organization of the Netherlands (SRON) SPEX-Airborne Reimbursable Agreement	Project-Specific Agreement (PSA)	Fully reimbursable agreement between NASA and SRON to facilitate operation of the SRON Spectropolarimeter for Planetary Exploration Airborne (SPEX-Airborne) instrument on board the ER-2 to make multi-angle spectro-polarimetric observations that can be used to retrieve aerosol and cloud properties and facilitate the development of a space-borne version of SPEX-Airborne.	20-Sep-17	20-Sep-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
517	Jet Propulsion Laboratory (JPL)	D-Wave Systems Inc.	Canada (CA)	Amendment and Extension 2: Reimbursable Space Act Agreement Between NASA and D-Wave Systems Inc. for Adiabatic Quantum Computing Fabrication Process Development (D-Wave)	Project-Specific Agreement (PSA)	Amendment and Extension 2: JPL Task Plan No. 82-16404, Revision C until 9/29/2019. Mission Directorate selected: SMD (Liz mentioned Earth Science being the closest to this mission). High Speed Computing, Performed by SMD. Amendment: Reimbursable cooperation in advanced computer technology; Specifically, in developing Adiabatic Quantum Computing (AQC) which is expected to outperform conventional supercomputers in a few years. Mission Directorate selected: SMD. High Speed Computing, Performed by SMD. NASA/D-Wave Systems Inc. performing research for adiabatic quantum computing fabrication process development.	25-Sep-17	29-Sep-19
518	Headquarters (HQ)	World Meteorological Organization Global Atmosphere Watch Programme (WMO/GAW)	Liberia (LI)	Global Learning and Observations to Benefit the Environment (GLOBE) Cooperation with the Ministry of Education of the Republic of Liberia	Project-Specific Agreement (PSA)	The Global Learning and Observations to Benefit the Environment (GLOBE) Program is an international environmental science and education program that brings students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community.	25-Sep-17	25-Sep-22
519	Langley Research Center (LaRC)	German Aerospace Center (DLR)	Germany (GM)	Amendment 1: Implementing Arrangement (IA) Between NASA and the German Aerospace Center (DLR) for Cooperation on the Coordinated Arrival/Departure/Surface Operations Research	Implementing Arrangement/Agreement (IA)	Amendment 1: NASA and DLR will continue their cooperation related to coordinated surface operations research under the IA signed 9/11/2012. Article 9 shall be amended. The Airspace Systems Program (ASP) within the NASA Aeronautics Research Mission Directorate (ARMD) focuses on mastery, intellectual stewardship, and technical excellence in fundamental air traffic management research. The ASP directly addresses the air traffic management research needs of NextGen, and the Institute of Flight Guidance within DLR Aeronautics Research conducts research to address the needs of the Single European Sky Air Traffic Management Joint Undertaking (SESAR-ATM-JU). Both NASA and DLR conduct research to enable the formation, development, integration, and demonstration of revolutionary concepts, capabilities, and technologies allowing significant increases in capacity, efficiency, and flexibility of the air transportation system.	30-Sep-17	31-Dec-19
520	George C. Marshall Space Flight Center (MSFC)	Canadian Space Agency (CSA)	Canada (CA)	Extension/Amendment 1: Implementing Arrangement (IA) Between NASA and Canadian Space Agency (CSA) on the Loan of Space Shuttle Equipment	Implementing Arrangement/Agreement (IA)	Extension/Amendment 1: Implementing Arrangement (IA) Between NASA/CSA to renew and modify the current IA, amending the agreement for 1) the location of the equipment on loan, 2) the new point of contact, and 3) the commencement of activities and duration (Sections 1, 4, 8). Framework Agreement of September 9, 2009, governs this Implementing Arrangement between NASA/CSA on the loan of Space Shuttle Equipment.	2-Oct-17	2-Oct-27

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
521	Goddard Space Flight Center (GSFC)	International Center for Integrated Mountain Development (ICIMOD)	Nepal (NP)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	The scientific goals of National Aeronautics and Space Administration (NASA) and the International Center for Integrated Mountain Development (ICIMOD) is to gain a more detailed understanding of global atmospheric change phenomena, with a particular emphasis on climate research and the assessment of air quality. To accomplish this objective, NASA has established a global network of Sun photometers, and the Aerosol Robotic Network (AERONET) in cooperation with a wide range of international partner agencies and institutions. Sun photometers are used to measure water vapor and aerosol optical properties. AERONET provides the necessary science measurements and are essential for ground-based validation of aerosol, cloud, and other measurements taken by satellites. In support of this cooperation NASA and ICIMOD will establish one or more Sun photometers at mutually agreed sites, the operation of which will improve the understanding of the properties and concentration of aerosols and clouds, and their impact on both global and regional scales.	3-Oct-17	3-Oct-27
522	Johnson Space Center (JSC)	Sokendai (The Graduate University for Advanced Studies)	Japan (JA)	International Stardust Samples Loan Agreement	Project-Specific Agreement (PSA)	Mutsumi Komatsu of Sokendai (The Graduate University for Advanced Studies) in Hayama, Kanagawa, Japan, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Stardust Sample Curator).	5-Oct-17	5-Oct-22
523	Headquarters (HQ),Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Italy (IT)	Implementing Arrangement (IA): NASA-Italian Space Agency (ASI) Mars 2020	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) under US-Italy Framework. ASI contribution of a laser retro-reflector array to the NASA Mars 2020 rover.	9-Oct-17	30-Jun-24
524	Glenn Research Center at Lewis Field (GRC)	Italian Center for Aerospace Research (CIRA)	Italy (IT)	Nonreimbursable Space Act Agreement Between NASA and the Italian Center for Aerospace Research (CIRA) (Centro Italiano Ricerche Aerospaziali) SCpA on Supercooled Large Drop Icing Research	Project-Specific Agreement (PSA)	NASA and CIRA will pursue cooperation on the fundamental study of Super-cooled Large Drop (SLD) icing. The purpose of this agreement is to advance aircraft safety through collaborative research in the area of SLD icing. The joint research is intended to improve the ability to accurately characterize and simulate SLD phenomenon, and to determine the ability of existing test facilities to reproduce the various aspects of SLD conditions.	12-Oct-17	12-Oct-22
525	Headquarters (HQ),Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Amendment: European Space Agency's (ESA) Mars Express Mission - High Resolution Stereo Camera (HRSC)	Project-Specific Agreement (PSA)	Amendment: NASA and DLR on the ESA's Mars Express Mission. The cooperation involves NASA support of U.S. Co-Investigators on the German High Resolution Stero Camera (HRSC), a Mars Express instrument. State Department said no C-175 required on the extension on 7/21/08.	16-Oct-17	31-Dec-21
526	Headquarters (HQ),Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Amendment: Mars Radio Science (MaRS) Experiment Onboard European Space Agency's (ESA) Mars Express Mission	Project-Specific Agreement (PSA)	Amendment: NASA, via U.S. Co-Investigators, will provide the MaRS Experiment for ESA's Mars Express Mission, which will be used to conduct radio science experiments. The ESA Mars Mission was launched on a Soyuz launch vehicle on June 2, 2003. Through an ESA Announcement of Opportunity, 3 co-investigators from Stanford University were selected for the MaRS Experiment, with the Principal Investigator from the University of Cologne. State Dept said no C-175 required on the extension on 7/21/08.	16-Oct-17	31-Dec-21

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
527	Jet Propulsion Laboratory (JPL)	Commonwealth Scientific and Industrial Research Organization (CSIRO),Government of Australia	Australia (AS)	Amendment 7: Space Vehicle Tracking and Communications Facilities in Australia	Project-Specific Agreement (PSA)	Amendment 7: The 7th Amendment to the Government-to-Government Agreement, signed in October 2017 and formally ratified by Australian Parliament in Feb 2018, extending the agreement until Feb 26, 2043. The 6th Amendment to the Government-to-Government Agreement, signed on March 27, 2014, retroactive to Feb 26, 2012, and extending until Feb 26, 2018. The 5th Amendment to the Government-to-Government Agreement, signed on January 11, 2012, and extending until Feb 26, 2014. The 4th Amendment to the Government-to-Government Agreement, signed on March 17, 2010, retroactive to Feb 26, 2010, and extending until Feb 26, 2012. The 3rd Amendment to the Government to Government Agreement, did Oct 26, 2000, retroactive to Feb 26, 2000, amending the Agreement significantly, establishing CSIRO as the Cooperating Agency, and extending it to Feb 26, 2010. The 2nd Amendment was dated and effective on May 2, 1990. The first amendment was dated and entered into force on Jul 21, 1982. The basic Diplomatic-level agreement provided for cooperation in the establishment, modification, management, operation, maintenance, support, and termination of NASA tracking and communications facilities in Australia. NASA and the Australian Department of Science and the Environment are designated as the cooperating agencies in the Agreement. The diplomatic notes for the basic agreement were exchanged on May 29 1980, but entered into force retroactive to Feb 26, 1980.	17-Oct-17	26-Feb-43
528	Glenn Research Center at Lewis Field (GRC)	University of Southern Queensland	Australia (AS)	Amendment 1: University of Queensland (UQ) Cavity Optomechanical Magnetometers	Project-Specific Agreement (PSA)	Amendment 1: NASA GRC and researchers from the University of Queensland (UQ) have a shared interest in the field of cavity optomechanical magnetometry. The goal of this activity is to advance the development of ultra-sensitive sensor capability, beyond what is currently available. The overall focus of this work will be on further enhancing the sensitivity primarily using double-disk resonators at two different size-scales. Accordingly, this effort will seek to apply cavity optomechanical magnetometers as magnetic sensors for applications and will perform proof-of-principle demonstrations of those applications. Successful development of cavity optomechanical magnetometers with outstanding sensitivity for measuring low flux fields would be of great benefit/interest for use in space science mission instruments. Applications of cavity optomechanical magnetometers to space research and communications will be performed during this collaboration. While NASA and UQ will interact in the above activities, the optimization of the cavity optomechanical and double-disk resonator architectures will be primarily performed by UQ. The selective testing for verification and optimization of performance will be done at NASA GRC.	18-Oct-17	31-Dec-22
529	Headquarters (HQ),Jet Propulsion Laboratory (JPL)	European Space Agency (ESA)	European Space Agency (ESA)	NASA-European Space Agency (ESA) ExoMars 2020 Letter of Agreement	Project-Specific Agreement (PSA)	NASA and ESA cooperation on ExoMars 2020 for exchange of technical expertise, scientific collaboration, and deep space network coordination.	18-Oct-17	1-Dec-24

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
530	Goddard Space Flight Center (GSFC)	Korea Astronomy and Space Science Institute (KASI)	Korea, Republic of (KS)	Reimbursable Space Act Agreement Between NASA and the Korea Astronomy and Space Science Institute for Compact Corongraph Development for the Balloon-Borne Investigation of Temperature and Speed of Electrons in the Corona (BITSE) Technology Demonstration Balloon Flight	Project-Specific Agreement (PSA)	Agreement for reimbursement of NASA's designing, developing, fabricating, testing and delivering compact coronagraph instrumentation for a future joint NASA-KASI Balloon-borne Investigation of Temperature and Speed of Electrons in the Corona (BITSE) mission.	23-Oct-17	31-Dec-20
531	Headquarters (HQ)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	NASA-JAXA Collaboration on Laser Communications (LCRD) Interoperability and Standards	Project-Specific Agreement (PSA)	NASA and JAXA have expressed mutual interest in a cooperative agreement that will allow the two agencies to develop a common laser communications relay standard at 1550 nm to ensure the interoperability of planned successor laser data relay satellites for both agencies to NASA's Laser Communications Relay Demonstration (LCRD) and JAXA's Optical Relay Satellite.	25-Oct-17	24-Oct-19
532	Johnson Space Center (JSC)	Earth-Life Science Institute (ELSI)	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Henderson J. Cleaves of the Earth-Life Science Institute (ELSI) in Tokyo, Japan, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	27-Oct-17	27-Oct-22
533	Johnson Space Center (JSC)	Imperial College London	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Mark Rehkamper of the Imperial College in London, UK, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	27-Oct-17	27-Oct-22
534	Goddard Space Flight Center (GSFC)	Deutscher Wetterdienst of the Federal Republic of Germany (German Weather Service)	Germany (GM)	Agreement Between NASA and Deutscher Wetterdienst (DWD) of the Federal Republic of Germany for Cooperation on the Network for the Detection of Atmospheric Chemical Change	Project-Specific Agreement (PSA)	Agreement Between NASA and Deutscher Wetterdienst (DWD) of the Federal Republic of Germany to cooperate on calibration and validation will sample the stratosphere to detect, measure, and analyze small changes in atmospheric chemistry.	30-Oct-17	30-Oct-22
535	Langley Research Center (LaRC)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement (IA) Between NASA and the German Aerospace Center for Cooperative Research on Deployable Composite Booms	Implementing Arrangement/Agreement (IA)	This Implementing Arrangement (IA) falls under the DLR Framework Agreement. NASA and DLR are individually pursuing research into the development and validation of thin-shell deployable composite boom structures for future small spacecraft applications and will engage in experimental testing and data exchange cooperation related to the physical behavior of these structures. Cooperation under this IA will advance the fundamental research in this area, enabling each Party to then separately develop specific small spacecraft flight applications.	6-Nov-17	6-Nov-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
536	Jet Propulsion Laboratory (JPL)	Technical University of Denmark (DTU)	Denmark (DA)	Extension 2: Agreement for the Nuclear Spectroscopic Telescope Array (NuSTAR) Mission	Project-Specific Agreement (PSA)	Agreement extension 2 of the Nuclear Spectroscopic Telescope Array (NuSTAR) Mission which entered into force February 29, 2009 and was to expire December 31, 2014; it was extended to December 31, 2014. November 1, 2017, NASA proposes extending agreement through December 31, 2019 in which DTU agrees. Danish Technical University (DTU) will provide NASA: 1) Multilayer coating of optics substrates for qualification model and flight optics; 2) Support for calibration and performance analysis of the flight optics; 3) Support for calibration and performance analysis of the flight optics; 4) Support for implementation of the multi-head star tracker system; and 5) Support for analysis and dissemination of NuSTAR scientific results. NASA will provide DTU: 1) Target materials for the flight multilayer coatings; 2) All optics substrates, design information, and requirements necessary for DTU to fabricate the flight coatings; and, 3) Membership on the science team and full access to the NuSTAR scientific data and analysis tools.	7-Nov-17	31-Dec-19
537	Jet Propulsion Laboratory (JPL)	Indian Space Research Organization (ISRO)	India (IN)	Reimbursable Space Act Agreement Between NASA and the Indian Space Research Organisation (ISRO) for Deep Space Network (DSN) Support for the Chandrayaan-2 Mission	Project-Specific Agreement (PSA)	NASA/Jet Propulsion Laboratory shall provide reimbursable navigation services and deep space network (DSN) tracking and associated support in order to enable communications with ISRO's second mission to the Moon: Chandrayaan-2. The mission consists of a lunar orbiter, a lander and a rover. NASA/JPL shall assist the ISRO by providing tracking, telemetry and command (TTC), ground communications, navigation, DSN scheduling services, compatibility testing, and other DSN support to the Chandrayaan-2 mission in order to further ISRO's objectives of a 'Soft and Safe Landing on a pre-determined site.'	7-Nov-17	7-Nov-20
538	Headquarters (HQ),Jet Propulsion Laboratory (JPL)	Indian Space Research Organization (ISRO)	India (IN)	Amendment 5: Reimbursable Space Act Agreement Between NASA and The Indian Space Research Organisation (ISRO) for NASA Spacecraft Communications and Navigation Support of the Mars Orbiter Mission (MOM)	Project-Specific Agreement (PSA)	Amendment 5, a two-year extension for NASA to provide the Indian Space Research Organization (ISRO) Mars Orbiter Mission (MOM) with cross-agency tracking, navigation, SPICE support, and telecommunications support services that will include having ISRO, the ISRO Satellite Centre (ISAC), and the ISRO Telemetry, Tracking and Command Network (ISTRAC), and NASA ground station antennas and orbiting spacecraft provide telecommunications (including telemetry and command) services, tracking services (to include radiometric tracking and Delta-Differenced One-Way Ranging (D-DOR)), and navigation services for spacecraft supported by both agencies.	8-Nov-17	30-Sep-19

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
539	Johnson Space Center (JSC)	Woodside Engineering Technologies PTY LTD.	Australia (AS)	Reimbursable Space Act Agreement: Annex 3: Between NASA and Woodside Energy Technologies Pty Ltd. Regarding Anthropomorphic Robotic Systems	Implementing Arrangement/Agreement (IA)	The purpose of Annex 3 is to further develop the manipulation of, and planning framework for, autonomous, robotic use of tools and interfaces. NASA Johnson Space Center (JSC) and Woodside are collaboratively working on developing humanoid robotic technology and robotic care-taking applications for not normally manned (NNM) rigs or uncrewed spacecraft, and developing anthropomorphic robotic systems that can be controlled autonomously or through shared control from remote locations. Robotic care-taking, controlled autonomously or through remote shared control, is essential technology for future exploration missions to the lunar or Martian environments. This Annex involves a three-phased approach to the continued development of the Affordance Templates user interface, which was released to Woodside as part of Annex 1.	9-Nov-17	9-Nov-19
540	Langley Research Center (LaRC)	University of Leeds	United Kingdom (UK)	Reimbursable Space Act Agreement Between NASA and the University of Leeds for the Design, Construction, and Loan of a Diode Laser Hygrometer	Project-Specific Agreement (PSA)	Reimbursable Agreement where NASA will design, build, and loan a Diode Laser Hygrometer to the University of Leeds on a reimbursable basis.	11-Nov-17	11-Nov-27
541	Goddard Space Flight Center (GSFC)	National Agency for Hydrometeorology and Environmental Monitoring	Mongolia (MG)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	To extend the term of the existing AERONET agreement to establish sun photometer station in Mongolia.	22-Nov-17	31-Mar-27
542	Langley Research Center (LaRC)	National Centre for Space Studies (CNES)	France (FR)	Monitoring of the Evolution and State of Clouds and Aerosol Layers (MESCAL) Mission Pre-Formulation Studies	Implementing Arrangement/Agreement (IA)	NASA and CNES will cooperate on pre-formulation studies for the Monitoring of the Evolution and State of Clouds and Aerosol Layers (MESCAL) Mission.	27-Nov-17	26-Nov-20
543	Goddard Space Flight Center (GSFC)	The American Institute in Taiwan	Taiwan (TW)	Extension 1: Micro-Pulse Lidar Network (MPLNET) and the Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	Extension 1: American Institute in Taiwan (AIT)/Taiperi Economic and Cultural Representative Office (TECRO) Agreement to establish lidar and/or sun photometer stations in Taiwan. Also included is the extension of the NASA/AIT Designated Representative Agreement.	28-Nov-17	31-Dec-27
544	Goddard Space Flight Center (GSFC)	Italian Space Agency (ASI)	Italy (IT)	Extension 2: Memorandum of Understanding (MOU) Between NASA and Agencia Spaziale Italia (ASI) Concerning the Gamma-ray Large Area Space Telescope (GLAST) Mission/Fermi	Project-Specific Agreement (PSA)	Extension 2: Memorandum of Understanding (MOU). MOU covers the cooperation between NASA and ASI on the GLAST mission. It replaces all previous Letter of Agreement's (LOA) between ASI and NASA for the GLAST mission.	30-Nov-17	31-Dec-19
545	Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Italy (IT)	Extension 2: Memorandum of Understanding (MOU) Between NASA and Agencia Spaziale Italia (ASI) Concerning the Nuclear Spectroscopic Telescope Array (NuSTAR) Mission	Project-Specific Agreement (PSA)	Extension 2: Memorandum of Understanding (MOU). NASA and ASI are cooperating on the Nuclear Spectroscopic Telescope Array (NuSTAR) mission. NASA is providing the mission while ASI is primarily providing the ground systems using their Malindi facility in Kenya.	30-Nov-17	31-Dec-19
546	Goddard Space Flight Center (GSFC)	Hiroshima University,Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Amendment 1: Agreement Among NASA, Japan Aerospace Exploration Agency (JAXA), and Hiroshima University for the NASA-LED GLAST Mission	Project-Specific Agreement (PSA)	Amendment 1 for NASA-JAXA Cooperation GLAST.	14-Dec-17	31-Dec-19
547	Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Italy (IT)	Memorandum of Understanding (MOU) Between the Italian Space Agency (ASI) and NASA Concerning Cooperation on the Mars Advanced Radar for Subsurface and Ionospheric Sounding (MARSIS) and Planetary Fourier Spectrometer (PFS) to be Flown on the European Space Agency's (ESA) 2003 Mars Express Mission	Project-Specific Agreement (PSA)	Memorandum of Understanding (MOU) defines the responsibilities of NASA and ASI and the terms and conditions for cooperation for development of the Mars Advanced Radar for Subsurface and Ionospheric Sounding (MARSIS) and the Planetary Fourier Spectrometer (PFS) to be flown on-board ESA's 2003 Mars Express Mission, and also provides for support of the U.S. and Italian P.I.'s and Co-PI's.	20-Dec-17	31-Dec-19

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
548	Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Italy (IT)	2005 Mars Reconnaissance Orbiter (MRO) Mission	Project-Specific Agreement (PSA)	A Memorandum of Understanding (MOU) to define NASA and the Italian Space Agency's (ASI) cooperation on activities associated with the NASA 2005 Mars Reconnaissance Orbiter (MRO) mission. ASI provided the Shallow Radar (SHARAD) instrument. MRO is planned for launch in August 2005 on an intermediate-class, expendable launch vehicle from Cape Canaveral Air Station, Florida. MRO will identify and characterize sites for future landed missions, and provide critical telecommunications relay capability for follow-on Mars missions. The nominal mission would end in December 2010, approximately 5.4 years after launch.	20-Dec-17	31-Dec-19
549	Langley Research Center (LaRC)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement (IA) Between NASA and the German Aerospace Center (DLR) for Cooperation on the Second Phase of the Emissions and Climate Impacts of Alternative Aviation Fuels (ECLIF-II) Project	Implementing Arrangement/Agreement (IA)	Under the Implementing Arrangement (IA) between NASA and the German Aerospace Center (DLR), NASA will deploy its DC-8 aircraft to Germany to collect airborne aerosol and contrail measurements from fuel burned on the DLR Advanced Technology Research Aircraft.	21-Dec-17	20-Dec-19
550	George C. Marshall Space Flight Center (MSFC),Headquarters (HQ),Johnson Space Center (JSC)	John Nurminen Events	Netherlands, The (NL)	Amendment 2: Nonreimbursable Space Act Agreement Between John Nurminen Events (JNE) and NASA for Collaboration on Outreach and Community Endeavors	Project-Specific Agreement (PSA)	Amendment 2: Nonreimbursable Space Act Agreement between John Nurminen Events and NASA for Collaboration on Outreach and Community Endeavors. JNE coordinates with NASA on funds and manages an international traveling space exhibition titled: NASA - A Human Adventure. JNE has authorized use of NASA insignia and loaned artifacts. Amendment: This cooperation specifically facilitates cooperation in J.N. Events' traveling exhibition, "NASA: A Human Adventure." J.N. Events pays all costs of developing, transporting and running the exhibit; NASA loans artifacts, advises on use of logo and destinations, and reviews and advises on all content re NASA history. Other = Office of Communications. Nonreimbursable Space Act Agreement between John Nurminen Events and NASA for collaboration on outreach and community endeavors. NASA and John Nurminen Events will collaborate on a traveling exhibition entitled NASA: A Human Adventure. The exhibition will focus on NASA contributions along with illuminating human stories behind the hardware. The exhibition will premier in Europe with the ultimate goal of touring throughout the U.S.	24-Dec-17	31-Dec-22

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
551	Kennedy Space Center (KSC)	Gilmour Space Technologies	Australia (AS)	Reimbursable Space Act Umbrella Agreement Between NASA and Gilmour Space Technologies for Research, Technology Development, and Educational Initiatives	Umbrella/Framework Agreement (UM/FW)	This is an Umbrella Agreement with Annex 1 attached. Annex 1 is for the purpose of conducting research on the performance of Gilmour's water extraction rover and its excavation rover during simulated surface operations, as well as the associated effects of surface environmental conditions on operations and performance. This will help address human exploration requirements for in-situ water recovery and protection/insulation of Martian and Lunar habitats using layers of excavated regolith. Gilmour will operate its rovers in the Kennedy Space Center (KSC) Regolith Test Bed (RTB) for a period of one week. The tests include performance assessments of rover mobility, regolith excavation and water extraction in the controlled environment of the RTB. KSC currently tests NASA excavation rovers in this facility. It is anticipated that future design enhancements of the Gilmour rovers will be evaluated in the RTB under subsequent annexes. Data from the Gilmour tests will allow KSC to compare the performance of alternative rover hardware designs and operational concepts to previous NASA rover experiments in an identical environment.	8-Jan-18	31-Dec-22
552	Goddard Space Flight Center (GSFC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Magnetospheric Multiscale Mission (MMS)	Project-Specific Agreement (PSA)	NASA and the Japan Aerospace Exploration Agency (JAXA), have a mutual interest in cooperating on the Magnetospheric Multiscale (MMS) mission. The purpose of this letter is to establish a Letter of Agreement (hereinafter, "the Agreement") between NASA and JAXA (hereinafter, "the Parties") to accommodate the participation of JAXA researchers, Dr. Yoshifumi Saito and Dr. Toshifumi Mukai, in the MMS mission. NASA's Science Mission Directorate (SMD) is sponsoring the development of the MMS mission, which is a project in the Solar TelTestrial Probes (STP) program. The MMS mission will explore the Earth's magnetosphere with a constellation of four spacecraft with identical scientific payloads. Measurements made by these four spacecraft will help to explain the fundamental physical processes involved with magnetic reconnection in the Earth's magnetosphere.	10-Jan-18	31-Dec-22
553	Johnson Space Center (JSC)	University of Manchester	United Kingdom (UK)	International Stardust Samples Loan Agreement	Project-Specific Agreement (PSA)	Professor Jamie Gilmour of The University of Manchestor in Manchestor, U.K., proposes to use the Stardust samples to undertake scientific investigations (described in one or more sample requests submitted by the PI to the Stardust Sample Curator at JSC and approved by the Stardust Sample Curator).	11-Jan-18	11-Jan-23

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
554	Goddard Space Flight Center (GSFC)	Canadian Space Agency (CSA)	Canada (CA)	Extension 6: Temporal History of Events and Macroscale Interactions During Substorms (THEMIS)	Project-Specific Agreement (PSA)	Extension 6: NASA and the Canadian Space Agency (CSA) have been cooperating on the THEMIS mission, which launched on February 17, 2007. This unique constellation of satellites has provided scientists with data to help resolve how Earth's magnetosphere stores and releases energy from the Sun by triggering geomagnetic substorms. THEMIS aims to determine what physical process in near-Earth space initiates the violent eruptions of the aurora that occur during substorms in the Earth's magnetosphere. CSA is responsible for the development and testing of the Ground Base Observatories. THEMIS is a 2-year mission consisting of 5 identical probes that will study the violent colorful eruptions of Auroras. Three of the remaining THEMIS satellites continue to study substorms that are visible in the northern hemisphere as aurora borealis.	22-Jan-18	31-Mar-20
555	Headquarters (HQ)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	NASA - Japan Aerospace Exploration Agency (JAXA) Agreement on Use of Alice Springs, Australia, Facilities for Scientific Balloon Preparation	Project-Specific Agreement (PSA)	NASA will allow JAXA to use property in Alice Springs, Australia, for the purposes of preparing a ballooning payload planned for a 2014 Launch.	25-Jan-18	31-Dec-19
556	Headquarters (HQ)	Ministry of Environment	Togo (TO)	NASA - Togo Global Learning an Observations to Benefit the Environment (GLOBE) Agreement	Project-Specific Agreement (PSA)	The GLOBE Program is an international environmental science and education program that brings students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community.	30-Jan-18	21-Dec-00
557	Goddard Space Flight Center (GSFC)	Istituto di Scienze dell'Atmosfera e del Clima (ISAC)	Italy (IT)	Hydrological Cycle in Mediterranean Experiment (HyMeX)	Project-Specific Agreement (PSA)	Hydrological Cycle in Mediterranean Experiment (HyMeX): NASA will contribute ground-based precipitation measuring instruments; The Istituto Di Scienze Dell' Atmosfera Del Clima Consiglio Nazionale Delle Ricerche (ISAC) will provide sites and data.	2-Feb-18	30-Nov-22
558	Goddard Space Flight Center (GSFC)	Mad Science Group (MSG)	Canada (CA)	Annex 2: Between NASA and Mad Science Group (MSG) for Cooperation on the Joint Development of Content for the Elementary School Category of the Optimus Prime Spinoff Promotion and Research Challenge (OPSPARC)	Implementing Arrangement/Agreement (IA)	Annex 2: NASA and Mad Science Group (MSG) will cooperate on the joint development of content for the Elementary School Category of Optimus Prime Spinoff Promotion and Research Challenge (OPSPARC) to foster science, technology, engineering, and mathematics (STEM) education and public outreach activities.	7-Feb-18	6-Feb-21
559	George C. Marshall Space Flight Center (MSFC)	University of Twente	Netherlands, The (NL)	SERVIR-ITC Capacity Building Cooperation	Project-Specific Agreement (PSA)	NASA SERVIR Program and the University of Twente Faculty of Geo-information and Science and Earth Observation (ITC) will cooperate in Earth science capacity building. ITC and SERVIR will jointly develop training and pair ITC faculty with SERVIR scientists to conduct research in food security and agriculture; water resources and water-related disasters; land cover and land use change; and weather and climate in SERVIR regions.	12-Feb-18	11-Feb-28
560	George C. Marshall Space Flight Center (MSFC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Chromospheric LAyer Spectro-Polarimeter (CLASP) 2	Project-Specific Agreement (PSA)	Chromospheric LAyer Spectro-Polarimeter (CLASP) 2 is a solar physics experiment to be launched on a NASA sounding rocket, and is a follow-on to the highly successful Chromospheric Lyman-Alpha Spectro-Polarimeter (CLASP) sounding rocket mission of 2015.	22-Feb-18	31-Dec-22

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
561	George C. Marshall Space Flight Center (MSFC),Johnson Space Center (JSC),Kennedy Space Center (KSC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Reimbursable Space Act Agreement Between NASA and the Japan Aerospace Exploration Agency (JAXA) for the Dispenser and Integration Services for the JAXA OMOTENASHI and EQUULEUS Cubesats on NASA's Exploration Mission-1	Project-Specific Agreement (PSA)	NASA will enter into a reimbursable agreement with JAXA to facilitate the provisioning of flight Dispenser hardware and associated mission integration services in support of two JAXA 6U CubeSats (also referred to as "secondary payloads")- OMOTENASHI and EQUULEUS- scheduled to fly aboard the first un-crewed launch of the fully developed Space Launch System (SLS) and Orion Spacecraft, Exploration Mission 1 (EM-1).	23-Feb-18	23-Feb-21
562	Goddard Space Flight Center (GSFC),Jet Propulsion Laboratory (JPL)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Earth Observation Satellite Data Exchange	Project-Specific Agreement (PSA)	JAXA will provide non-public data to NASA Principle Investigators who responded to JAXA announcements of opportunity.	26-Feb-18	26-Feb-28
563	Johnson Space Center (JSC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Amendment 2: Implementing Arrangement (IA): NASA - Japan Aerospace Exploration Agency (JAXA) Reimbursable Agreement for Mouse Habitat Unit Utilization Services for the International Space Station (ISS)	Implementing Arrangement/Agreement (IA)	Amendment 2: Implementing Arrangement (IA): NASA will provide JAXA with pre-flight and post-flight ground services and in-flight transportation services to support the JAXA Mouse Habitat Unit on the ISS. This 2nd amendment adds services for MHU-3 on SpX-14.	27-Feb-18	31-Dec-20
564	Johnson Space Center (JSC)	Mohammed Bin Rashid Space Centre (MBRSC)	United Arab Emirates (AE)	Reimbursable Space Act Agreement Between NASA and the Mohammed Bin Rashid Space Centre (MBRSC) for Support of the United Arab Emirates Astronaut Selection	Project-Specific Agreement (PSA)	The MBRSC has announced their intention to select an Emirati astronaut corps of four astronauts to train and eventually launch to space. They are currently accepting and evaluating applications and will soon begin basic medical and psychometrics testing. The MBRSC has requested support from NASA in the form of expert advice on their plan for astronaut selection, support for a trial-run of their astronaut selection process, and participation in the selection process. NASA shall provide programmatic expertise, expertise in human resources, and medical and psychological expertise, as those subjects pertain to astronaut selection.	27-Feb-18	26-Feb-23
565	Headquarters (HQ)	Nagoya University of Japan	Japan (JA)	NASA-University of Nagoya Agreement for the Imaging X-ray Polarimetry Explore (IXPE) Mission	Project-Specific Agreement (PSA)	Nagoya university hardware contribution to the IXPE mission.	27-Feb-18	31-Dec-26
566	Goddard Space Flight Center (GSFC)	Manila Observatory of the Philippines	Philippines (RP)	Agreement Between NASA and the Manila Observatory of the Philippines for Cooperation on the Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	Agreement between NASA and the Manila Observatory of the Philippines for Cooperation in the Aerosol Robotic Network (AERONET). Originally signed January 14, 2009, and expired January 30, 2018; then extended to January 30, 2028. NASAs scientific goals include a more detailed understanding of global atmospheric change phenomena, with a particular emphasis on climate research and the assessment of air quality.	1-Mar-18	30-Jan-28
567	Ames Research Center (ARC)	The Office of the Crown Prince of the Hashemite Kingdom of Jordan	Jordan (JO)	Reimbursable Space Act Agreement Between NASA and the Crown Prince Foundation (CPF) of the Hashemite Kingdom of Jordan for Participation in the NASA International Internship Project (NASA I^2)	Project-Specific Agreement (PSA)	This reimbursable Agreement enables Jordan's participation in NASA I^2. NASA will provide a number of evolving internship opportunities that will be offered three times during the calendar year: Spring, Summer, and Fall (referred to as a 'Term'), depending on the Agency's current work and mentor availability. The Crown Prince Foundation (CPF) may provide NASA with a range of 1-10 student nominations per Term, from which NASA will select an intern for the research or project opportunities identified in NASA's online internship application system.	4-Mar-18	31-Dec-23

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
568	Langley Research Center (LaRC)	University Hospital Southampton NHS Foundation Trust (was The Hospital Trust - Southampton University Hospitals NHS Trust)	United Kingdom (UK)	Extension 2: Agreement Between NASA and the University Hospital Southampton NHS Foundation Trust (originally The Hospital Trust - Southampton University Hospitals NHS Trust) for the Clinical Testing and Comparison of the Cerebral Cochlear Fluid Pressure (CCFP) and the Ultrasonic Pulsed Phase-Locked Loop (PPLL) for Noninvasive Measurement of Intracranial Pressure	Project-Specific Agreement (PSA)	Extension 2: Continual cooperation on the clinical testing and comparison of Cerebral Cochlear Fluid Pressure (CCFP) and Ultrasonic Pulsed Phase-Locked Loop (PPLL) for Noninvasive Measurement of Intracranial Pressure. NASA proposes also that Article 5 (Management Points of Contact) of the Agreement be revised to reflect the change in NASA's point of contact. Amendment 1: NASA desires to continue this collaboration on a no cost basis with the same terms as the original agreement. NASA proposes the deletion of Article 4-Schedule and Milestones, since the milestones have been met. New Name is: University Hospital Southampton NHS Foundation Trust as of October 1, 2011. NASA/SUHT will undertake the clinical comparison of the Cerebral Cochlear Fluid Pressure (CCFP) and the ultrasonic Pulsed Phase-Locked Loop (PPLL) approaches of noninvasively measuring Intracranial Pressure (ICP), specifically comparing and correlating CCFP and PPLL device responses to changes in ICP. NASA will provide one digital PPLL device and two transducer maintenance and repair. SUHT will perform a human research study using a computer controlled tilt table with both CCFP and PPLL devices to produce the oscillatory changes in ICP in human subjects and patients and will make all study data available through peer reviewed journal articles.	13-Mar-18	31-Oct-20
569	Goddard Space Flight Center (GSFC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Space Geodesy: Collaborative Research on the Quasi-Zenith Satellite System (QZSS)	Project-Specific Agreement (PSA)	To cooperate on the use of a Global Navigation Satellite Systems (GNSS) sensor station to provide timely and accurate Earth orientation parameters in the determination of GNSS orbits and assess the value of GNSS and Very Long Baseline Interferometry (VLBI) monitoring stations in the accuracy of all GNSS systems. Both Parties support the collaborative measurement of Earth Orientation.	14-Mar-18	30-Sep-23
570	Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	NASA-European Space Agency (ESA) International Space Station (ISS) International Space Life Sciences Working Group (ISLSWG) Letter of Agreement for Bed Rest Studies	Implementing Arrangement/Agreement (IA)	A letter agreement under the Arrangement among the ISS partners concerning International Space Life Sciences Flight Experiments on the ISS. This agreement enables collaborative suite of investigations in order to understand the physiological and psychological changes which occur as a result of exposure to reduced gravity environment and to develop countermeasures to be validated on the ISS.	16-Mar-18	31-Dec-20
571	George C. Marshall Space Flight Center (MSFC)	Universite Joseph Fourier a Grenoble	France (FR)	Amendment 1: Agreement Between NASA and the Universite Joseph Fourier, Grenoble of France, for Cooperation in the Hydrological Cycle in Mediterranean Experiment (HyMeX)	Project-Specific Agreement (PSA)	Amendment 1: NASA and the Universite Joseph Fourier, Grenoble of France, will cooperate on hydrological research in support of the Global Precipitation Measurement (GPM) mission.	20-Mar-18	30-Nov-22
572	Ames Research Center (ARC)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement (IA) Between NASA and the German Aerospace Center (DLR) for Collaboration on Fundamental Studies of Combined Aerothermal-Mechanical Erosion	Implementing Arrangement/Agreement (IA)	This Implementing Arrangement (IA) falls under the DLR Framework Agreement. The Parties will perform collaborative fundamental studies of the mechanical erosion of materials due to atmospheric dust during entry at Mars. The data generated will be used to construct and validate computational codes useful for the design of entry systems to safely deliver landers for both robotic science missions and human missions. The experimental campaign will be jointly designed by NASA and DLR, and then executed by DLR. This IA will allow for the ability to model and predict erosion due to dust, which is critical to mission design and assurance for future Mars missions.	28-Mar-18	28-Mar-21

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
573	Goddard Space Flight Center (GSFC)	Canadian Space Agency (CSA)	Canada (CA)	NASA-Canadian Space Agency (CSA) X-ray Astronomy Recovery Mission (XARM) Implementing Arrangement (IA)	Implementing Arrangement/Agreement (IA)	Canada will provide calibration testing for the X-ray Astronomy Recovery Mission (XARM) Resolve instrument. NASA and Canadian scientists on the NASA science team.	28-Mar-18	31-Dec-25
574	Johnson Space Center (JSC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Amendment and Extension 1: Cooperation Between NASA and the Japan Aerospace Exploration Agency (JAXA) on Wind Tunnel Testing in JAXA's High Enthalpy Shock Tunnel (HIEST)	Project-Specific Agreement (PSA)	Amendment and extension 1 of previous cooperation involving use of JAXA's High Enthalpy Shock Tunnel (HIEST) to provide wind tunnel testing on a NASA Apollo-like capsule.	30-Mar-18	31-Mar-21
575	Johnson Space Center (JSC)	Institut fur Geologie und Mineralogie	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Jens Barosch of the Institute of Geology and Mineralogy in Cologne, Germany, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	5-Apr-18	5-Apr-23
576	Johnson Space Center (JSC)	Tohoku University	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Yoshihiro Furukawa of Tohoku University in Sendai, Japan, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	5-Apr-18	5-Apr-23
577	Johnson Space Center (JSC)	Natural History Museum	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Natasha Almeida of the Natural History Museum in London, UK, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	5-Apr-18	5-Apr-23
578	Goddard Space Flight Center (GSFC)	Institute of Space Technology (IST)	Pakistan (PK)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	to establish a sun photometer station in Pakistan to improve the understanding of the properties and concentrations of aerosols	6-Apr-18	15-Aug-00
579	Wallops Flight Facility (WFF)	German Aerospace Center (DLR)	Germany (GM)	Polar Mesosphere Winter Echoes Sounding Rockets Campaign (PMWE)	Implementing Arrangement/Agreement (IA)	Under the Polar Mesosphere Winter Echoes Sounding Rockets Campaign (PMWE) are collaborative sounding rockets activity with DLR covering a 2018 and 2019 campaign.	7-Apr-18	31-Dec-21
580	Johnson Space Center (JSC)	Montreal Science Center	Canada (CA)	International Lunar Sample Loan Agreement (Lunar Sample Display)	Project-Specific Agreement (PSA)	NASA and the Montreal Science Center in Montreal, Canada, enter into an agreement for the loan of a lunar sample display under 70215,395 lunar sample number and weighing 24.880 grams. The sample will be picked up from NASA on 3 April 2018. NASA desires to make certain Lunar samples available to the Institution by entering into this Loan Agreement. The Institution proposes to use these Lunar samples to maximize access to lunar samples and provide opportunities for lunar sample viewing.	9-Apr-18	9-Apr-23
581	Johnson Space Center (JSC)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement (IA) Between NASA and the German Aerospace Center (DLR) Acting for DLR Institute of Aerospace Medicine for Cooperation on Investigations Utilizing the German Aerospace Center's :envihab Facility	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) Agreement between NASA and DLR to conduct collaborative human research investigations and cooperation utilizing DLR's envihab facility.	11-Apr-18	31-Dec-25

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
582	Johnson Space Center (JSC)	Israel Space Agency (ISA)	Israel (IS)	Implementing Arrangement (IA) Between NASA and Israel Spacey Agency (ISA) for Cooperation on the Matryoshka AstroRad Radiation Experiment (MARE) on NASA's Exploration Mission-1	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA): On its first flight (Exploration Mission-1 or 'EM-1'), NASA will demonstrate its new Space Launch System rocket's heavy-lift capability and send an un-crewed Orion spacecraft into deep space. The agency will also take advantage of additional available mass and space to provide the rare opportunity to fly secondary payloads in the Orion Crew Module (CM) to conduct experiments beyond low-Earth orbit. MARE is one of the secondary payloads that will be installed in the Orion CM that will launch on EM-1. MARE will provide tissue equivalent assessment of the radiation environment that future crews may be exposed to and demonstrate radiation shielding effectiveness of a crew Radiation Shield Vest (RSV). The experiment includes two (2) tissue equivalent torsos, one RSV, active dosimeters, and passive dosimeters. MARE is an experiment co-managed by the German Aerospace Center (DLR) and ISA (hereinafter referred to as 'the experiment team'), whose roles are detailed under a separate DLR-to-ISA MOU. NASA will participate in the MARE payload as a co-Principal Investigator (PI).	17-Apr-18	17-Apr-26
583	Johnson Space Center (JSC)	Institut de Planetologie et d'Astrophysique de Grenoble	France (FR)	International Cosmic Dust Samples Loan Agreement	Project-Specific Agreement (PSA)	Lydie Bonal of Institut de Planetologie et d'Astrophysique de Grenoble in Grenoble, France, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Cosmic Dust Sample Curator).	25-Apr-18	25-Apr-23
584	Johnson Space Center (JSC)	Institut de Planetologie et d'Astrophysique de Grenoble	France (FR)	International Cosmic Dust Samples Loan Agreement	Project-Specific Agreement (PSA)	Eric Quirico of Institut de Planetologie et d'Astrophysique de Grenoble in Grenoble, France, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Cosmic Dust Sample Curator).	25-Apr-18	25-Apr-23
585	Johnson Space Center (JSC)	Institut d'Astrophysique Spatiale	France (FR)	International Cosmic Dust Samples Loan Agreement	Project-Specific Agreement (PSA)	Zahia Djouadi-Bouali of Institut d'Astrophysique Spatiale in Orsay, France, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Cosmic Dust Sample Curator).	25-Apr-18	25-Apr-23
586	Johnson Space Center (JSC)	The University of Kent	United Kingdom (UK)	International Stardust Samples Loan Agreement	Project-Specific Agreement (PSA)	Dr. Penelope Wozniakiewicz of the University of Kent in Kent, UK, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Stardust Sample Curator).	25-Apr-18	25-Apr-23
587	Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Italy (IT)	Implementing Arrangement Between NASA and the Italian Space Agency of the Italian Republic for Cooperation on the Sardinia Deep Space Antenna	Implementing Arrangement/Agreement (IA)	The purpose of this Implementing Arrangement is to set forth the respective responsibilities of the Implementing Agencies and the terms and conditions under which NASA and ASI will cooperate on activities related to the Sardinia Deep Space Antenna (SDSA) upgrade and tracking utilization, previously referred to as the Sardinia Radio Telescope (SRT).	9-May-18	9-May-23
588	Johnson Space Center (JSC)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement (IA) Between NASA and the German Aerospace Center for Cooperation on Human Research Investigations Utilizing the International Space and Life Sciences Working Group (ISLSWG) Joint Parabolic Flight Partial G Campaign	Implementing Arrangement/Agreement (IA)	This Implementing Arrangement (IA) sets forth cooperation between DLR and NASA for DLR to enable NASA to participate through DLR in the International Space and Life Sciences Working Group (ISLSWG) Joint Parabolic Flight Partial-G Campaign on human research investigations.	15-May-18	30-Jun-19
589	Goddard Space Flight Center (GSFC)	National Centre of Meteorology Seismology	United Arab Emirates (AE)	Amendment and Extension 1: Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	Amendment and Extension 1: NASA and the National Centre of Meteorology and Seismology (NCMS) will cooperate on the AERONET program. NASA will provide equipment on loan which NCMS will host at a mutually agreed location.	16-May-18	31-Mar-27

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
590	Johnson Space Center (JSC)	The Museon	Netherlands, The (NL)	International Lunar Sample Loan Agreement (Lunar Sample Display)	Project-Specific Agreement (PSA)	NASA and The Museon in The Hague, The Netherlands, enter into an agreement for the loan of a lunar sample display under 70215,266 lunar sample number and weighing 24.989 grams. The sample will be picked up from NASA on 30 May 2018. NASA desires to make certain Lunar samples available to the Institution by entering into this Loan Agreement. The Institution proposes to use these Lunar samples to maximize access to lunar samples and provide opportunities for lunar sample viewing.	23-May-18	23-May-23
591	Glenn Research Center at Lewis Field (GRC)	French National Aerospace Research Center (ONERA)	France (FR)	Amendment 1: Cooperative Agreement Between NASA and the Office National D'Etudes De Recherches Aerospatiales (CNES) for Cooperation in the Area of Swept-Wing Ice Accretion Characterization and Aerodynamics Research	Project-Specific Agreement (PSA)	Amendment 1: NASA and ONERA will jointly produce data from experimental and computational tasks that will benefit both organizations in the field of aircraft safety. The research is focused on understanding the effects of Reynolds number modeling on aerodynamic degradation resulting from the accretion of ice on modern aircraft wings. NASA will develop models that will be tested in an ONERA facility and the data from the testing will be available to the Parties. The data will eventually be available to the public through publications, reports, conference presentations, and journal articles. NASA and ONERA will contribute approximately equivalent resources to the research and will jointly receive benefits from the effort that exceed research that could be obtained from operating independently.	31-May-18	31-May-20
592	Glenn Research Center at Lewis Field (GRC)	French National Aerospace Research Center (ONERA)	France (FR)	Swept Wing Ice Accretion	Project-Specific Agreement (PSA)	Extension of an agreement to enable aerodynamic testing and data analysis of swept wings	31-May-18	31-May-20
593	Jet Propulsion Laboratory (JPL)	University of Zurich (UZH)	Switzerland (SZ)	Cooperation on Joint European Airborne Imaging Spectrometer Science Campaign	Project-Specific Agreement (PSA)	Cooperation on Joint European Airborne Imaging Spectrometer Science Campaign: To fly JPL imaging spectrometers on UZH-provided aircraft throughout Europe in the summer of 2018. This agreement allows for multiple flight campaigns.	31-May-18	31-May-23
594	Ames Research Center (ARC)	University of Porto in Portugal	Portugal (PO)	Amendment 1: Agreement Between NASA and University of Porto in Portugal for Cooperation on Airborne Science through Aerial and Underwater Data Collection, Analysis, and Validation	Project-Specific Agreement (PSA)	Amendment 1: NASA and University of Porto in Portugal will cooperate on airborne science through Aerial and underwater data collection, analysis, and Validation.	1-Jun-18	15-Mar-21
595	Marshall Space Flight Center (MSFC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Solar Physics Satellite (SOLAR-B) Project/Hinode	Project-Specific Agreement (PSA)	SOLAR-B satellite is a JAXA-led mission in sun-synchronous orbit to study the solar photosphere corona, and transition region. JAXA is responsible for the overall spacecraft and launch, and NASA provided the Focal Plane Package, the stand-alone X-Ray Telescope, and major optical components for the EUV Imaging Spectrometer.	5-Jun-18	10-Jun-25
596	Goddard Space Flight Center (GSFC)	Indian Institute of Technology (IIT), Kanpur	India (IN)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and the Indian Institute of Technology (IIT) Kanpur will extend cooperation dating from 2001 on an AERONET sunphotometer station located at IIT Kanpur. NASA provides the equipment, and ITT Kanpur provides the site.	6-Jun-18	30-Jan-31
597	Jet Propulsion Laboratory (JPL)	Old Port of Montreal Corporation Inc.	Canada (CA)	Cooperative Agreement for the Loan of the Soil Moisture Active Passive (SMAP) 1/3 Scale Model from NASA JPL to the Montreal Science Centre	Project-Specific Agreement (PSA)	JPL is providing the Montreal Science Centre, as a temporary loan, the Soil Moisture Active Passive (SMAP) 1/3 Scale Model for use as a display element in the museum's 'Water in the Universe' exhibit. The property will be on public display from approximately July 15, 2018, until October 15, 2021.	9-Jun-18	31-Dec-21

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
598	Kennedy Space Center (KSC)	Airbus Defence and Space GmbH (Airbus)	Germany (GM)	Reimbursable Space Act Umbrella Agreement Between NASA and Airbus for the European Space Agency (ESA) Service Module Launch Site Processing	Umbrella/Framework Agreement (UM/FW)	This Umbrella Reimbursable Space Act agreement (hereinafter referred to as the "Agreement") shall be for the purpose of providing NASA Kennedy Space Center (KSC) services to support Airbus activities related to the European Space Agency (ESA) Service Modules (ESMs). The supported Airbus activities will precede the turnover of the ESA hardware to Lockheed-Martin for integration with the NASA Orion Crew Module, as set forth in the "NASA/ESA Joint Implementation Plan for the Multi-Purpose Crew Vehicle (MPCV) Service Module (SM)." NASA will make services available to Airbus on a nonexclusive, noninterference basis with NASA or other Government-sponsored activities, including other reimbursable and commercial support activities. This proposed agreement does not include the granting of any real property interest in NASA facilities. The Parties shall execute one (1) Annex Agreement (hereinafter referred to as the 'Annex') concurrently with this Umbrella Agreement. The Parties may execute subsequent Annexes under this Umbrella Agreement consistent with the purpose and terms of this Umbrella Agreement. This Umbrella Agreement shall govern all Annexes executed hereunder; no Annex shall amend this Umbrella Agreement. Each Annex will detail the specific purpose of the proposed activity, responsibilities, schedule and milestones, and any personnel, property or facilities to be utilized under the task.	19-Jun-18	19-Jun-23
599	Johnson Space Center (JSC)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement (IA) Between NASA and the German Aerospace Center (DLR) for Cooperation on the Matroshka Astrorad Radiation Experiment (MARE) On NASA's Exploration Mission-1	Implementing Arrangement/Agreement (IA)	Under the Implementing Arrangement (IA), on the first flight of Exploration Mission-1 ("EM-1,") NASA will demonstrate its new Space Launch System rocket's heavy-lift capability and send an un-crewed Orion spacecraft into deep space. The agency will also take advantage of additional available mass and space to provide the rare opportunity to fly secondary payloads in the Orion Crew Module (CM) to conduct experiments beyond low-Earth orbit. MARE is one of the secondary payloads that will be installed in the Orion CM that will launch on EM-1. MARE will provide tissue equivalent assessment of the radiation environment that future crews may be exposed to and demonstrate radiation shielding effectiveness of a crew Radiation Shield Vest (RSV). The experiment includes two (2) tissue equivalent torsos, one RSV, active dosimeters, and passive dosimeters. MARE is an experiment co-managed by DLR and the Israel Space Agency (ISA) (hereinafter referred to as "the experiment team"), whose roles are detailed under a separate DLR ISA Memorandum of Understanding. NASA will participate in the MARE payload as a co-Principal Investigator (PI).	19-Jun-18	19-Jun-26
600	Johnson Space Center (JSC)	Centre de Recherches Petrographiques et Geochimiques	France (FR)	International Cosmic Dust Samples Loan Agreement	Project-Specific Agreement (PSA)	Yves Marrocchi of Centre de Recherches Petrographiques et Geochimiques in Nancy, France, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Cosmic Dust Sample Curator).	22-Jun-18	22-Jun-23
601	Johnson Space Center (JSC)	Max Planck Institute for Chemistry	Germany (GM)	International Cosmic Dust Samples Loan Agreement	Project-Specific Agreement (PSA)	Peter Hoppe of Max Planek Institute for Chemistry in Mainz, Germany, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Cosmic Dust Sample Curator).	22-Jun-18	22-Jun-23

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
602	Johnson Space Center (JSC)	Max Planck Institute for Chemistry	Germany (GM)	International Stardust Samples Loan Agreement	Project-Specific Agreement (PSA)	Peter Hoppe of Max Planck Institute for Chemistry in Mainz, Germany, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Stardust Sample Curator).	22-Jun-18	22-Jun-23
603	Johnson Space Center (JSC)	University of Leicester	United Kingdom (UK)	International Stardust Samples Loan Agreement	Project-Specific Agreement (PSA)	John Bridges of the University of Leicester, in Leicester, U.K., proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Stardust Sample Curator).	22-Jun-18	22-Jun-23
604	Glenn Research Center at Lewis Field (GRC),Headquarters (HQ),Johnson Space Center (JSC)	European Space Agency (ESA)	European Space Agency (ESA)	Annex 2: Implementing Arrangement (IA) Between NASA and the European Space Agency (ESA) Concerning the Provision by ESA of Elements for NASA's Multi-Purpose Crew Vehicle as a Contribution to the Offset of ESA's Responsibility for International Space Station Common System Operations Costs and to Compensate NASA for Transportation Costs and Other Supporting Services	Implementing Arrangement/Agreement (IA)	Annex 2 covers EM-2 Payment and Technical Discussions for EM-3 and beyond. Barter arrangement. ESA will provide the Service Module (SM) for the Exploration Mission - 1 Multi-Purpose Crew Vehicle (MPCV) as contribution to the offset of ESA's Responsibility for International Space Station common system operations costs and to compensate NASA for transportation costs and other supporting services including TDRSS support and an astronaut ISS increment flight opportunity. Also includes an Annex which lays the groundwork for ESA to also provide the Exploration Mission-2 Service Module and assistance for the Exploration Mission-3 activities.	22-Jun-18	31-Dec-24
605	Headquarters (HQ)	Ministry of Basic Education of the Republic of Botswana	Botswana (BC)	Global Learning and Observations to Benefit the Environment (GLOBE) Agreement with the Ministry of Education and Skills Development of the Republic of Botswana	Project-Specific Agreement (PSA)	The GLOBE Program is an international environmental science and education program that brings students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community.	26-Jun-18	26-Jun-23
606	Ames Research Center (ARC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Agreement Between NASA and Japan Aerospace Exploration Agency (JAXA) for Cooperation on Areas of Mutual Interest in Unmanned Aircraft System Traffic Management	Project-Specific Agreement (PSA)	The Parties will conduct research into the application of Unmanned Aircraft System (UAS) Traffic Management (UTM) capabilities to support time critical disaster relief operations. NASA contribution will be the NASA-developed UTM capabilities which will be integrated with the JAXA-developed Integrated Aircraft Operation System for Disaster Relief (D-NET) system.	28-Jun-18	31-Dec-19
607	Goddard Space Flight Center (GSFC)	National Institute of Water and Atmospheric Research Ltd. (NIWA)	New Zealand (NZ)	Agreement Between NASA and the National Institute of Water and Atmospheric Research of New Zealand for Cooperation in Lidar Atmospheric Measurement Comparisons	Project-Specific Agreement (PSA)	Cooperation in airborne science in the framework of the International Network for the Detection of Atmospheric Composition Change Validation Campaign (NDACC).	29-Jun-18	31-Dec-28
608	Ames Research Center (ARC)	Ministry of Business, Innovation and Employment (MBIE)	New Zealand (NZ)	Reimbursable Space Act Agreement Between NASA and the Ministry of Business, Innovation and Employment of New Zealand for Participation in the NASA International Internship Project (NASA I^2)	Project-Specific Agreement (PSA)	The Ministry of Business, Innovation and Employment (MBIE) will participate in the NASA International Internship (NASA I^2) Project.	3-Jul-18	31-Dec-23
609	Goddard Space Flight Center (GSFC)	Universite de la Reunion	France (FR)	Network for the Detection of Atmospheric Chemical Change (NDACC)	Project-Specific Agreement (PSA)	NASA will use its mobile validation instrumentation at the Maido facility on Reunion Island to participate in a Network for the Detection of Atmospheric Chemical Change (NDACC) validation campaign with the Universite de la Reunion ozone profiling instruments.	4-Jul-18	31-Jan-28
610	Johnson Space Center (JSC)	Cardiff University	United Kingdom (UK)	International Lunar Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Marc-Alban Millet of the Cardiff University in Cardiff, U.K., proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	12-Jul-18	31-Oct-22

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
611	Johnson Space Center (JSC)	University of Manchester	United Kingdom (UK)	International Lunar Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Vera Fernandes of The University of Manchester in Manchester, U.K., proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Apollo Sample Curator).	12-Jul-18	31-Oct-22
612	Langley Research Center (LaRC)	French National Aerospace Research Center (ONERA)	France (FR)	Agreement Between NASA and the Office National d'Etudes et de Recherches Aerospatiales (ONERA) of France on Sonic Boom Predictions	Project-Specific Agreement (PSA)	NASA and ONERA seek to cooperate to advance the state of the art in supersonic aircraft sonic boom prediction capabilities. The cooperation will create a forum through which the Parties can share technical knowledge and data in order to independently improve their own capabilities, with the overall objective of mitigating the effects of civil air transportation sonic boom. The proposed collaborative activities will extend the verification of NASA and ONERA sonic boom prediction capabilities. Under this Agreement, NASA and ONERA will define common verification cases and perform detailed analyses and comparisons of the results produced by NASA's and ONERA's numerical tools for prediction of the propagation of sonic booms to the ground.	18-Jul-18	17-Jul-20
613	Johnson Space Center (JSC)	German Aerospace Center (DLR)	Germany (GM)	Amendment 1: NASA-German Aerospace Center (DLR) Implementing Arrangement (IA) for the Use of High Definition Earth Viewing Payload (HDEV)	Implementing Arrangement/Agreement (IA)	Amendment 1: NASA and DLR will cooperate on NASA's HDEV Payload. NASA developed the HDEV payload to validate the space-based performance of the cameras in a variety of operating modes to exercise and demonstrate the features and longevity of the commercially available equipment for future International Space Station (ISS) Program use. DLR is interested in utilizing the HDEV Payload for educational purposes with German schools and universities.	20-Jul-18	1-Aug-20
614	Goddard Space Flight Center (GSFC)	Eduardo Mondlane University	Mozambique (MZ)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	to establish sun photometer stations at mutually agreed sites in Mozambique to measure vital areosol optical properties and water vapor	24-Jul-18	31-Dec-25
615	Ames Research Center (ARC)	Agencia Espacial Mexicana (AEM)	Mexico (MX)	Amendment 1: Reimbursable Space Act Agreement Between NASA and the Agencia Espacial Mexicana (AEM) for Participation in the NASA International Internship Program (NASA I^2)	Project-Specific Agreement (PSA)	Amendment 1: This amendment to the agreement enables Agencia Espacial Mexicana's (AEM) continued participation in the NASA International Internship Project (NASA I^2) by another 5 years. It is designed to provide a collaborative environment where U.S. interns or fellows (university undergraduate & students) (university graduate students) can interact and work alongside international peers on research opportunities. Original: This agreement enables AEM's participation in the NASA International Internship Program (NASA I^2), designed to provide a collaborative environment where U.S. interns (university undergraduate students) or fellows (university graduate students) can interact and work alongside international peers on research opportunities.	30-Jul-18	31-Dec-23
616	Ames Research Center (ARC)	Brazilian Space Agency (AEB)	Brazil (BR)	Reimbursable Space Act Agreement Between NASA and the Brazilian Space Agency (AEB) for Participation in NASA International Internship Project (NASA I^2)	Project-Specific Agreement (PSA)	This Reimbursable Space Act Agreement will facilitate the Brazilian Space Agency's (AEB) participation in the NASA International Internship Project (NASA I^2) designed to provide a collaborative environment where U.S. interns or fellows can interact and work alongside with international peers on science or engineering research opportunities.	13-Aug-18	31-Dec-23

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
617	Headquarters (HQ)	American Institute in Taiwan (AIT)	Taiwan (TW)	Amendment: Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	Amendment: Agreement between the American Institute in Taiwan (AIT) and the Taipei Economic and Cultural Representative Office (TECRO) in the U.S. for Cooperation in the GLOBE Program. Intending to increase the awareness of students throughout the world about the global environment; seeking to contribute to increased scientific understanding of the Earth; and Desiring to support improved student achievement in science and mathematics.	13-Aug-18	13-Aug-00
618	Johnson Space Center (JSC)	Freie Universitat Berlin	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Timm John of Freie Universitat Berlin in Berlin, Germany, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	14-Aug-18	14-Aug-23
619	Johnson Space Center (JSC)	Hiroshima University	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Dr. Hikaru Yabuta of the Hiroshima University in Hiroshima, Japan, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	14-Aug-18	14-Aug-23
620	Johnson Space Center (JSC)	University of Tokyo	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Professor Takafumi Niihara of the School of Engineering, The University of Tokyo, in Tokyo, Japan, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator.	14-Aug-18	14-Aug-23
621	Goddard Space Flight Center (GSFC)	Korea Astronomy and Space Science Institute (KASI)	Korea, Republic of (KS)	Implementing Arrangement (IA) for Cooperation on the Korea Astronomy and Space Science Institute (KASI) Geomagnetic Storm Forecast Model (KSFM)	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) for cooperation on the development and installation of Korea Astronomy and Space Science Institute (KASI) geomagnetic storm forecasting model at the GSFC Community Coordinated Modeling Center (CCMC).	14-Aug-18	14-Aug-23
622	George C. Marshall Space Flight Center (MSFC)	Finnish Meteorological Institute (FMI)	Finland (FI)	Amendment and Extension 1: Global Precipitation Measurement Long-Term Experiment at the Lapland Unified Measurement Site	Project-Specific Agreement (PSA)	Amendment and Extension 1: NASA and the Finnish Meteorological Institute (FMI) will conduct a long-term measurement experiment at the University of Helsinki Hyytiala Station for Measuring Ecosystem - Atmosphere Relations (SMEAR)-II station.	16-Aug-18	31-Aug-23
623	Langley Research Center (LaRC)	Korea Institute of Science and Technology (KIST)	Korea, Republic of (KS)	Fully Reimbursable Space Act Umbrella Agreement Between NASA and the Korea Institute of Science and Technology (KIST) Regarding 4U Nanomaterial Testing	Umbrella/Framework Agreement (UM/FW)	Fully Reimbursable Space Act Umbrella Agreement: Test new nanomaterial composites provided by South Korea/Korean Institute of Science and Technology (KIST). KIST is developing lightweight structural, multifunctional composites for extreme environments in aerospace applications. New nanomaterial composites to be fabricated will be ultra lightweight and ultra high strength materials with ultra high electrical conductivity and ultra high thermal conductivity to cover various extreme environmental conditions. All four "ultra high" aspects will be referred to as "4U." The purpose of the Initial Annex (Annex 1) is for NASA and KIST to undertake delivery and testing of 4U nanomaterial composites suitable for extreme environments, which can be used for aerospace, automobile, construction, and plant industries.	17-Aug-18	17-Aug-21

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
624	Headquarters (HQ),Johnson Space Center (JSC)	Chalmers University of Technology	Sweden (SW)	Amendment 2: Chalmers University of Technology Visiting Researchers Agreement (VRA) for Larry Toups	Visiting Researcher Agreement (VRA)	Amendment 2: NASA and Chalmers University of Technology will extend the agreement for an additional three-year period, through September 1, 2021, under the same terms and conditions as the existing Agreement and to update Chalmers' Point of Contact information. This amendment also serves to update the focus of Mr. Toups' research, which will now focus on lunar habitation systems applicable to missions to the Moon (previously his research focused on the broader category of 'long duration space missions'). This includes technologies such as water systems, lightweight materials, and other autonomous and power efficient systems associated with 'smart homes' of the future, directly applicable to future lunar mission concepts (previously 'deep space habitation' concepts).	28-Aug-18	1-Sep-21
625	Ames Research Center (ARC)	Norwegian Space Centre (NSC)	Norway (NO)	Reimbursable Space Act Agreement Between NASA and the Norwegian Space Center for Participation in the NASA International Internship Project (NASA I^2)	Project-Specific Agreement (PSA)	This Reimbursable Space Act Agreement will be for the purpose of facilitating the Norwegian Space Center's (NSC) participation in the NASA International Internship Project (NASA I^2) which facilitates international collaboration through education and shared experiences in space exploration, science, and aeronautics. Up to a max of 30 Norwegian students may be nominated for competitive internships at NASA field centers in a calendar year. NASA mentors make the final selection of interns.	30-Aug-18	31-Dec-23
626	Ames Research Center (ARC)	National Institute of Higher Education, Research, Science & Technology (NIHERST)	Trinidad & Tobago (TD)	Amendment and Extension 1 of Reimbursable Space Act Agreement Between the National Institute of Higher Education Research, Science & Technology (NIHERST) and NASA for Participation in the NASA International Internship Program (NASA I^2)	Project-Specific Agreement (PSA)	From the Office of STEM Engagement. Amendment and Extension 1: This amendment and extension continues cooperation in NASA I^2 until Dec. 31, 2023. Original: This agreement enables NIHERST's participation in the NASA I^2 Program, designed to provide a collaborative environment where U.S. interns (university undergraduate students) can interact and work alongside international peers on research opportunities.	3-Sep-18	31-Dec-23
627	Headquarters (HQ),Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Italy (IT)	NASA's Double Precision Orbit Determination Program (DPODP) for Cassini Radio Science Investigations	Project-Specific Agreement (PSA)	Extension 5: This extension continues the cooperation on the NASA-ASI Double Precision Orbit Determination Program (DPODP) for Cassini Radio Science Investigations. This 2011 extension continues the cooperation on the NASA-ASI Double Precision Orbit Determination Program (DPODP) for Cassini Radio Science Investigations.	5-Sep-18	30-Sep-19
628	Goddard Space Flight Center (GSFC),Jet Propulsion Laboratory (JPL)	South African Radio Astronomical Observatory (SARAO)	South Africa (SF)	Space Geodesy: Hartebeesthoek Radio Astronomy Observatory (HartRAO)	Project-Specific Agreement (PSA)	Agreement between the National Aeronautics and Space Administration (NASA) and the South African Radio Astronomy Observatory (SARAO) concerning Space Geodetic Research using the Global Navigation Satellite System (GNSS) technique. This agreement supersedes a previous agreement with the same organization, then the Hartbeesthoek Radio Astronom Observatory. This agreement establishes one or more permanent GPS ground stations, with the first agreed-upon station to be located at Hartebeesthoek.	12-Sep-18	12-Sep-28

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
629	Kennedy Space Center (KSC)	University of Zurich (UZH)	Switzerland (SZ)	Nonreimbursable Agreement Between NASA and the University of Zurich to Enable Cooperation on Biological Research Activities	Project-Specific Agreement (PSA)	NASA and the University of Zurich (UZH) have identified a mutual interest in cooperating on multiple biological research activities, including the terrestrial aspects of research utilizing various platforms such as ground-based micro-gravity simulators, parabolic and suborbital flight campaigns, sounding rockets, and the International Space Station (ISS). In particular, NASA and UZH desire to provide support to each other's investigations and work together to develop and propose new investigations. The current investigations involve studying the epigenetic control of gene expression in altered gravity. UZH has three experiments in this area, one to be conducted on ISS, one on a sounding rocket in Sweden in summer 2018, and last to be conducted on parabolic flights in Switzerland in summer 2018. NASA is also conducting similar research in its microgravity simulators. This Agreement also shall allow the Parties to identify and conduct additional research activities similar to the above investigations. The specific scope of cooperation under this Agreement involves sharing data, expertise and test samples. Exchange of hardware, commitment to fund future investigations, or providing access to particular NASA facilities are beyond the scope of this Agreement.	14-Sep-18	30-Sep-23
630	Langley Research Center (LaRC)	Delft University of Technology (DUT)	Netherlands, The (NL)	Extension 1: Agreement Between the National Aeronautics and Space Administration and the Delft University of Technology (TUDelft) for the Advancement of Composite Aerospace Shell Structures for the Advancement of Composite Aerospace Structures	Project-Specific Agreement (PSA)	Extension 1: Conduct joint structural testing of NASA and partner composite shell structures. NASA and TUDelft will each develop advanced composite aerospace structural test articles and test the materials in their respective facilities.	17-Sep-18	30-Sep-20
631	Johnson Space Center (JSC)	University of Munster	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Gregory Brennecka of the University of Munster in Munster, Germany, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	18-Sep-18	18-Sep-23
632	Goddard Space Flight Center (GSFC)	University of Botswana - Okavango Research Institute (UB-ORI)	Botswana (BC)	Aerosol Robotic Network (AERONET) with the University of Botswana - Okavango Research Institute (UB-ORI)	Project-Specific Agreement (PSA)	NASA's scientific goals include a more detailed understanding of global atmospheric change phenomena, with a particular emphasis on climate research and the assessment of air quality. To these ends, NASA has established a global network of Sun photometers in cooperation with a wide range of international partner agencies and institutions. Sun photometers are used to measure water vapor and aerosol optical properties. AERONET provides necessary science measurements as well as being essential for ground-based validation of aerosol, cloud, and other measurements taken by satellites.	19-Sep-18	19-Sep-28

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
633	George C. Marshall Space Flight Center (MSFC)	National University of Cordoba (UNC)	Argentina (AR)	Agreement Between NASA and the Facultad de Matematicas, Astronomia, Fisica e Informatica (FAMAF) of the Universidad Nacional de Cordoba (UNC) Concerning Cooperation in Ground Validation and Severe Weather Research	Project-Specific Agreement (PSA)	To collect ground-based observations of deep convection and lightning in the lee of the Andes Mountains in Argentina to support the Remote Electrification, Lightning, and Mesoscale/microscale Processes and Adaptive Ground Observations (RELAMPAGO) field campaign, a U.S. National Science Foundation (NSF)-led interagency and international field effort to study convective clouds over Argentina, of which UNC is a partner. NASA will contribute Autonomous Parsivel disdrometer Units (APU) and rain gauges for operations during the RELAMPAGO field campaign during the austral summer of 2018/2019. UNC will receive, store, and provide power and internet for the equipment. UNC will also assist NASA engineers with logistics, in-field monitoring of hardware, in-field installation and disassembly, and make data available to NASA.	20-Sep-18	20-Sep-19
634	Johnson Space Center (JSC)	University of Lille 1	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Hugues Leroux of Unite Materiaux et Transformations, Universite de Lille in Villeneuve d'Ascq, France, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by the PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	25-Sep-18	25-Sep-23
635	Goddard Space Flight Center (GSFC),Jet Propulsion Laboratory (JPL)	Nigerian National Space Research and Development Agency (NASDRA)	Nigeria (NI)	Extension: Space Geodesy: Extension of LOA Between NASA and the Nigerian National Space Research and Development Agency (NASDRA) for Cooperation on Geo-Hazards Research	Project-Specific Agreement (PSA)	Extension: NASA responsibilities include long term loan of one or more GPS receivers, antennas, computers, and associated equipment, training for use of NASA provide equipment and software, data analysis support. NASDRA responsibilities include - logistical support, personnel, and support data analysis.	25-Sep-18	25-Sep-28
636	Johnson Space Center (JSC)	Tohoku University	Japan (JA)	International Stardust Samples Loan Agreement	Project-Specific Agreement (PSA)	Tomoki Nakamura of Tohoku University in Sendai, Japan, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Stardust Sample Curator).	28-Sep-18	28-Sep-23
637	Johnson Space Center (JSC)	University of Manchester	United Kingdom (UK)	International Stardust Samples Loan Agreement	Project-Specific Agreement (PSA)	Ian C. Lyon of The University of Manchester in Manchester, U.K., proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Stardust Sample Curator).	28-Sep-18	28-Sep-23
638	Goddard Space Flight Center (GSFC)	Korea Astronomy and Space Science Institute (KASI)	Korea, Republic of (KS)	Implementing Arrangement (IA) for Cooperation on the Balloon-Borne Investigation of Temperature and Speed of Electrons in the Corona (BITSE)	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) for cooperation on development and execution of technology demonstration balloon flight for a compact coronagraph instrument. Projected 2019 launch.	28-Sep-18	31-Dec-24
639	Goddard Space Flight Center (GSFC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	X-Ray Imaging and Spectroscopy Mission (XRISM)	Project-Specific Agreement (PSA)	NASA will provide a key instrument and mission management expertise to this JAXA-led mission.	2-Oct-18	2-Oct-29
640	Goddard Space Flight Center (GSFC),Jet Propulsion Laboratory (JPL)	Israel Space Agency (ISA)	Israel (IS)	Implementing Arrangement (IA) Between NASA and the Israel Space Agency for Cooperation on the SpaceIL Lunar Mission	Implementing Arrangement/Agreement (IA)	This is a SMD and HEOMD agreement and an Implementing Arrangement (IA) under a US-Israel Framework. NASA will contribute a laser retroreflector array (LRA) and Deep Space Network (DSN) support to the SpaceIL lunar lander. SpaceIL, through the Israel Space Agency, will contribute science data to NASA.	3-Oct-18	3-Oct-22
641	Goddard Space Flight Center (GSFC)	Institute of Oceanology, Polish Academy of Sciences (PAS)	Poland (PL)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	To establish a sun photometer station to improve the understanding of the properties and concentration of aerosols and their relationship to aerosols on global and regional scales.	8-Oct-18	8-Oct-28

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
642	Goddard Space Flight Center (GSFC)	University of the Republic (Uruguay)	Uruguay (UY)	NASA UDELAR AERONET	Project-Specific Agreement (PSA)	NASA has established a global network of Sun photometers, and the Aerosol Robotic Network (AERONET) in cooperation with a wide range of international partner agencies and institutions. Sun photometers are used to measure water vapor and aerosol optical properties. AERONET provides the necessary science measurements and are essential for ground-based validation of aerosol, cloud, and other measurements taken by satellites.	9-Oct-18	9-Oct-28
643	Jet Propulsion Laboratory (JPL)	Commonwealth Scientific and Industrial Research Organization (CSIRO)	Australia (AS)	Cooperating Agency Arrangement Between the National Aeronautics and Space Administration of the United States of America and the Commonwealth Scientific and Industrial Research Organization of the Commonwealth of Australia for the Management and Operations of Space Vehicle Tracking and Communication Facilities in Australia	Implementing Arrangement/Agreement (IA)	Amendment 3: Full update and amendment to the original 1981 Cooperating Agency Arrangement. This Cooperating Agency Arrangement is pursuant to AS-0126-0, Government to Government Agreement, February 26, 1980, as amended, between NASA and CSIRO to implement the cooperative program for establishment, modification, management, operation, maintenance, support, and termination of NASA tracking and communications facilities in Australia. This Cooperating Agency Arrangement has the same period of performance as the Government to Government Agreement, initially February 26, 1990, then extended to February 26, 2000, and February 26, 2010, and then to February 2018; in February 2018, a completely updated version was signed, extending cooperation until February 2043.	11-Oct-18	26-Feb-43
644	Johnson Space Center (JSC)	Agricultural University of Athens	Greece (GR)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Ioannis Baziotis of Agricultural University of Athens in Athens, Greece, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	16-Oct-18	16-Oct-23
645	Johnson Space Center (JSC)	National Space Centre	United Kingdom (UK)	International Lunar Sample Loan Agreement (Lunar Sample Display)	Project-Specific Agreement (PSA)	NASA and the National Space Centre in Leicester, England, enter into an agreement for the loan of a lunar sample display under 74255,14 and weighs 67.553 grams. NASA desires to make certain Lunar samples available to the Institution by entering into this Loan Agreement. The Institution proposes to use these Lunar samples to maximize access to lunar samples and provide opportunities for lunar sample viewing.	23-Oct-18	23-Oct-23
646	Jet Propulsion Laboratory (JPL)	Colombian Geological Survey (CGS) (formerly National Institute for Geology and Mineralogy (INGEOMINAS)	Colombia (CO)	Memorandum of Understanding (MOU) Between the National Aeronautics and Space Administration and The Colombian Geological Survey (CGS) Concerning Cooperation on Space Geodesy	Project-Specific Agreement (PSA)	Memorandum of Understanding (MOU) Agreement (follows on from CO-0004-0) to support the continued operations of established Global Navigation and Satellite System (GNSS) sites, and establishment of new Space Geodesy research sites in Colombia. This Agreement follows on from a previous Agreement with the same institution, formerly known as the National Institute for Geology and Mineralogy.	24-Oct-18	24-Oct-28
647	Goddard Space Flight Center (GSFC)	University of the Witwatersrand	South Africa (SF)	Agreement Between NASA and the University of Witwatersrand, Johannesburg, for Cooperation in the Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	AERONET agreement with the University of Witwatersrand will provide a long term loan basis, one or more sun photometer systems and/or associated equipment for continuous operation at mutually-agreed sites; It will provide utilities, security, and housing for the station(s) at mutually-agreed location(s).	1-Nov-18	28-Oct-28
648	Johnson Space Center (JSC)	Institut fur Mineralogie, Univ. Munster	Germany (GM)	International Cosmic Dust Samples Loan Agreement	Project-Specific Agreement (PSA)	Christian Vollmer of the Institute for Mineralogy, University of Muenster, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Cosmic Dust Sample Curator).	7-Nov-18	7-Nov-23

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
649	Johnson Space Center (JSC)	Institute for Geolchemistry & Petrology	Switzerland (SZ)	International Cosmic Dust Samples Loan Agreement	Project-Specific Agreement (PSA)	Henner Busemann of the Institute for Geolchemistry and Petrology in Zurich, Switzerland, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Cosmic Dust Sample Curator).	7-Nov-18	7-Nov-23
650	Johnson Space Center (JSC)	Institute for Geolchemistry & Petrology	Switzerland (SZ)	International Stardust Samples Loan Agreement	Project-Specific Agreement (PSA)	Henner Busemann of the Institute for Geolchemistry & Petrology in Zurich, Switzerland, proposes to use the samples to undertake scientific investigations (described in a sample request submitted by the PI to the Stardust Sample Curator).	7-Nov-18	7-Nov-23
651	Jet Propulsion Laboratory (JPL)	German Aerospace Center (DLR)	Germany (GM)	Amendment and Extension 2: NASA-German Aerospace Center (DLR) Letter of Agreement (LOA) for Cooperation on Radiation Assessment Detector (RAD) on the NASA Mars Science Laboratory (MSL) Mission	Project-Specific Agreement (PSA)	Amendment and Extension 2: Letter of Agreement (LOA) for collaboration between NASA and the German Aerospace Center (DLR) on NASA's Mars Science Laboratory (MSL) Mission. This involves the provision of components of the Radiation Assessment Detector (RAD) Instrument. The instrument will characterize the broad spectrum of radiation at the surface of Mars, an essential precursor to human exploration of the planet. December 31, 2018, is the new expiration date. Amendment and Extension 1: Letter of Agreement (LOA) for collaboration between NASA and the German Aerospace Center (DLR) on NASA's Mars Science Laboratory (MSL) Mission. This involves the provision of components of the Radiation Assessment Detector (RAD) Instrument. The instrument will characterize the broad spectrum of radiation at the surface of Mars, an essential precursor to human exploration of the planet. December 31, 2018, is the new expiration date.	14-Nov-18	31-Dec-22
652	Goddard Space Flight Center (GSFC)	Institute of Applied Physics, Academy of Sciences of Moldova (ASM)	Moldova (MD)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	The purpose of this letter agreement is to formalize cooperation between the National Aeronautics and Space Administration (NASA) of the United States of America and the Institute of Applied Physics of the Academy of Sciences (IAP-ASM) of Moldova (hereinafter referred to as "the Parties"), in the global AErosol RObotic NETwork (AERONET) program. NASA's scientific goals include a more detailed understanding of global atmospheric change phenomena, with a particular emphasis on climate research and the assessment of air quality.	26-Nov-18	22-Sep-00
653	Goddard Space Flight Center (GSFC)	Regional Centre for Mapping of Resources for Development (RCMRD)	Kenya (KE)	Letter of Agreement Between the National Aeronautics and Space Administration and The Regional Centre for Mapping of Resources for Development (RCMRD) Concerning Cooperation on Space Geodesy	Project-Specific Agreement (PSA)	Agreement to support the continued operations of established Global Navigation and Satellite System (GNSS) sites, and establishment of new Space Geodesy research sites in the Regional Centre for Mapping of Resources for Development (RCMRD) region.	28-Nov-18	6-Feb-27
654	Jet Propulsion Laboratory (JPL)	Swiss Federal Institute of Technology Zurich of the Swiss Confederation (ETH-Zurich)	Switzerland (SZ)	NASA-the Swiss Federal Institute of Technology - Zurich (ETHZ), represented by Prof. Domenico Giardini, Institute of Geophysics, InSight Agreement	Project-Specific Agreement (PSA)	NASA-the Swiss Federal Institute of Technology - Zurich (ETHZ), represented by Prof. Domenico Giardini, Institute of Geophysics, InSight Agreement: ETHZ is providing electronic components on the CNES-led Seismic Experiment for Interior Structure (SEIS) instrument for the NASA-led Interior Exploration using Seismic Investigations, Geodesy, and Heat Transport (InSight) mission.	29-Nov-18	31-Dec-22

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
655	Ames Research Center (ARC),George C. Marshall Space Flight Center (MSFC)	Fundacao Para a Ciencia e a Technologia (Foundation for Science and Technology) (FCT)	Portugal (PO)	Amendment 1: Reimbursable Space Act Agreement Between NASA and the Foundation for Science and Technology and the Ministry of Science, Technology and Higher Education of Portugal for Participation in the NASA International Internship Program (NASA I^2)	Project-Specific Agreement (PSA)	Amendment 1: This amendment + agreement enables Portugal's participation in the NASA International Internship Project ("NASA I^2"). NASA I^2 is designed to provide a collaborative environment for U.S. and Portuguese interns to interact and work alongside each other on research opportunities. NASA internship sessions are arranged in three Terms during the calendar year (Spring, Summer, and Fall Terms). NASA Centers: Agency-wide, beginning with ARC, MSFC. This Reimbursable Space Act Agreement enables Portugal's participation in the NASA International Internship Program (hereinafter referred to as "NASA I ^2"). NASA I ^2 is designed to provide a collaborative environment for U.S. and Portuguese interns (university undergraduate level students) or fellows (university graduate level students) to interact and work alongside each other on research opportunities. NASA internship and fellowship sessions are arranged in three Terms during the calendar year (Spring, Summer, and Fall Terms).	10-Dec-18	31-Dec-24
656	Headquarters (HQ)	The National Institute of Environmental Research of the Republic of Korea (NIER)	Korea, Republic of (KS)	Memorandum of Understanding Between the National Aeronautics and Space Administration of the United States of America and the National Institute of Environmental Research of the Republic of Korea Concerning Cooperation in Pollution Studies, Calibration, and Validation	Project-Specific Agreement (PSA)	Agreement to conduct calibration and validation of the NIER GEMS and NASA TEMPO instruments, which include ultraviolet spectrometers that will monitor daily variations in ozone, nitrogen dioxide, sulfur dioxide, formaldehyde, glyoxal, and other key elements of air pollution.	11-Dec-18	11-Dec-23
657	Goddard Space Flight Center (GSFC)	Canadian Space Agency (CSA)	Canada (CA)	Extension 1 to the Agreement Between NASA and Canadian Space Agency (CSA) for Cooperation on the James Webb Space Telescope (JWST) Program	Project-Specific Agreement (PSA)	Extension 1: This agreement provides for the cooperation between NASA and Canadian Space Agency (CSA) on the James Webb Space Telescope (JWST) mission. CSA will provide the Fine Guidance Sensor while NASA will build the spacecraft. The European Space agency (ESA) is also a mission partner and will launch the mission. Formerly the Next Generation Space Telescope (NGST). Original: This agreement provides for the cooperation between NASA and Canadian Space Agency (CSA) on the James Webb Space Telescope (JWST) mission. CSA will provide the Fine Guidance Sensor while NASA will build the spacecraft. The European Space agency (ESA) is also a mission partner and will launch the mission. Formerly the Next Generation Space Telescope (NGST).	11-Dec-18	31-Mar-27
658	George C. Marshall Space Flight Center (MSFC)		European Space Agency (ESA)	Reimbursable Agreement Between The National Aeronautics and Space Administration of the United States of America and The European Space Agency for WEGA-E Engine Thrust Chamber Assembly LOX/Methane Tests	Project-Specific Agreement (PSA)	Reimbursable agreement for testing of ESA's VEGA-Evolution (VEGA-E) Thrust Chamber Assembly (TCA).	12-Dec-18	12-Dec-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
659	Johnson Space Center (JSC)	Woodside Engineering Technologies PTY LTD.	Australia (AS)	Reimbursable Space Act Agreement: Amendment 2 of Annex 2 (Annex 2A) Between NASA and Woodside Energy Technologies Pty Ltd. Regarding Anthropomorphic Robotic Systems	Implementing Arrangement/Agreement (IA)	Amendment 2 of Annex 2 (Annex 2A): Under this Annex, NASA is to provide to Woodside Energy Technologies Pty Ltd. a series of NASA civil servant and contractor engineers to provide maintenance and support of the loaned robotic system. Amendment and Extension 1 of Annex 2: $240,451.44 USD in Annex 2 + $436,308.06 for the amendment and extension of Annex 2 = $676,779.50 USD new total for Annex 2. NASA Johnson Space Center and Woodside are collaboratively working on developing humanoid robotic technology and robotic care-taking applications for not-normally manned (NNM) rigs, and developing anthropomorphic robotic systems that can be controlled autonomously or through shared control from offshore locations. Robotic care-taking, controlled autonomously or through remote shared control, is essential technology for future exploration missions to the lunar or Martian environments. The amendment and extension includes sending an additional two NASA engineers and a NASA contractor to Australia for 90 days each, consecutively, for maintenance and support of the R2C unit delivered as part of the Annex 1. This is under the Reimbursable Space Act Umbrella Agreement between NASA and Woodside Energy Technologies Pty Ltd Regarding Anthropomorphic Robotic Systems. Original: Mission Directorates: Space Technology and HEO. NASA Johnson Space Center and Woodside are collaboratively working on developing humanoid robotic technology and robotic care-taking applications for not	13-Dec-18	13-Dec-19
660	Jet Propulsion Laboratory (JPL)	University of Zurich (UZH)	Switzerland (SZ)	Reimbursable Space Act Agreement Between NASA and the University of Zurich (UZH) for UZH High-Fidelity Compact Wide Imaging Spectrometer Development	Project-Specific Agreement (PSA)	NASA-the University of Zurich (UZH) Reimbursable Space Act Agreement for UZH High-Fidelity Compact Wide Imaging Spectrometer Development: On a reimbursable basis, NASA will provide to UZH an aircraft-compatible version of the sensor head that is part of the existing Compact Wide Imaging Spectrometer (CWIS) currently tested at JPL. This will be a fully functional scientific instrument to be used in future remote measurement research activities, including potential collaborative scientific research with JPL and other NASA centers.	17-Dec-18	17-Dec-21
661	Headquarters (HQ),Jet Propulsion Laboratory (JPL)	European Space Agency (ESA)	European Space Agency (ESA)	Extension 3: NASA-European Space Agency (ESA) Cooperation on the Mars Express Mission	Project-Specific Agreement (PSA)	Extension 3: The terms and conditions by which relevant aspects of the cooperation between NASA and European Space Agency (ESA) shall be conducted within the framework of the Mars Express mission. Primary activities address telecommunications necessary for Mars Express mission operations, navigation and data acquisition. The mission will study Martian atmosphere and the surface of the planet. Extension 2: The terms and conditions by which relevant aspects of the cooperation between NASA and European Space Agency (ESA) shall be conducted within the framework of the Mars Express mission. Primary activities address telecommunications necessary for Mars Express mission operations, navigation and data acquisition. The mission will study Martian atmosphere and the surface of the planet.	17-Dec-18	31-Dec-23

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
662	Headquarters (HQ),Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	France (FR)	Extension 4: Spectroscopic Investigation of the Characteristics of the Atmosphere of Mars (SPICAM) on Mars Express	Project-Specific Agreement (PSA)	Extension 4: NASA support for US Co-I on French-built SPICAM instrument on ESA Mars Express mission. SPICAM is part of the Mars Express orbiter. Amendment 3: NASA support for U.S. Co-I on French-built the SPICAM instrument on ESA Mars Express Mission. SPICAM is part of the Mars Express orbiter.	20-Dec-18	31-Dec-20
663	Headquarters (HQ),Jet Propulsion Laboratory (JPL)	Canadian Space Agency (CSA)	Canada (CA)	Extension 2: Implementing Arrangement (IA) Mars Science Laboratory (MSL) Mission	Implementing Arrangement/Agreement (IA)	Extension 2: This Implementing Arrangement (IA) is for NASA and Canadian Space Agency (CSA) to continue collaborating on the Alpha Particle X-ray Spectromenter (APXS) instrument currently on the Mars Science Laboratory (MSL) rover, and falls under the US-Canada Framework Agreement. Extension 1: This Implementing Arrangement (IA) is for NASA and Canadian Space Agency (CSA) to continue collaborating on the Alpha Particle X-ray Spectromenter (APXS) instrument currently on the Mars Science Laboratory (MSL) rover, and falls under the US-Canada Framework Agreement.	11-Jan-19	31-Mar-20
664	Johnson Space Center (JSC)	Kitakyushu City	Japan (JA)	International Lunar Sample Loan Agreement (Lunar Sample Display)	Project-Specific Agreement (PSA)	NASA and Kitakyushu City in Kitakyushu, Japan, enter into an agreement for the loan of a lunar sample display under 12006,1 and weighs 176.383 grams. The sample will be picked up from NASA on 13 December 2018 (see JSC Public Affairs specialist e-mail on dates). NASA desires to make certain Lunar samples available to the Institution by entering into this Loan Agreement. The Institution proposes to use these Lunar samples to maximize access to lunar samples and provide opportunities for lunar sample viewing.	5-Feb-19	31-Jul-23
665	George C. Marshall Space Flight Center (MSFC)		Italy (IT)	IMPLEMENTING ARRANGEMENT BETWEEN THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION OF THE UNITED STATES OF AMERICA AND THE ITALIAN SPACE AGENCY OF THE ITALIAN REPUBLIC ON THE LAUNCH OF THE ARGOMOON CUBESAT ON EXPLORATION MISSION 1	Implementing Arrangement/Agreement (IA)	NASA will launch ASI's ArgoMoon CubeSat on EM-1 in exchange for resulting data/images collected by the satellite.	6-Feb-19	6-Feb-24
666	Goddard Space Flight Center (GSFC)	European Space Agency (ESA)	European Space Agency (ESA)	Laser Interferometer Space Antenna (LISA)	Project-Specific Agreement (PSA)	Study agreement to determine NASA contributions to the ESA-led LISA mission.	14-Feb-19	31-Dec-23
667	Johnson Space Center (JSC)	Domaine Universitaire	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Lydie Bonal (PI) of Domaine Universitaire in St-Martin d'Heres, France, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	19-Feb-19	19-Feb-24
668	Johnson Space Center (JSC)	Max Planck Institute for Chemistry	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Peter Hoppe (PI) of Max Planck Institute for Chemistry in Mainz, Germany, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	19-Feb-19	19-Feb-24
669	Johnson Space Center (JSC)	Ibaraki University	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Ko Hashizume (PI) of Ibaraki University in Mito, Ibaraki, Japan, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	19-Feb-19	19-Feb-24

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
670	Johnson Space Center (JSC)	Institute for Geolchemistry & Petrology	Switzerland (SZ)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Henner Busemann (PI) of the Institute for Geochemistry & Petrology, in Zurich, Switzerland, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	19-Feb-19	19-Feb-24
671	Johnson Space Center (JSC)	University of London	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Ian C. Crawford (PI) of the University of London in London, U.K., proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	19-Feb-19	19-Feb-24
672	Johnson Space Center (JSC)	University of Alberta	Canada (CA)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Christopher Herd of the University of Alberta, Edmonton, AB, Canada, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	27-Feb-19	27-Feb-24
673	Johnson Space Center (JSC)	Institut de Planetologie et d'Astrophysique de Grenoble	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Pierre Beck of the Institut de Plantologie et d'Astrophysique de Grenoble (IPAG) in France, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	27-Feb-19	27-Feb-24
674	Johnson Space Center (JSC)	University of Munster	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Thorsten Kleine, University of Muenster in Munster, Germany, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	27-Feb-19	27-Feb-24
675	Johnson Space Center (JSC)	Wilhelms-Universitat	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Addi Bischoff of Wilhelms-University of Munster in Munster, Germany, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	27-Feb-19	27-Feb-24
676	Johnson Space Center (JSC)	Universitat Bayreuth	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Audrey Bouvier of the Universitat Bayreuth in 95447 Bayreuth, Germany, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	27-Feb-19	27-Feb-24
677	Johnson Space Center (JSC)	The Open University	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	S. P. Schwenzer of The Open University in Milton Keynes, United Kingdom, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	27-Feb-19	27-Feb-24

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
678	Johnson Space Center (JSC)	the Natural History Museum	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Ashley King of The Natural History Museum in London, United Kingdom, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	27-Feb-19	27-Feb-24
679	Goddard Space Flight Center (GSFC)	Sao Tome and Principe	Central African Republic (CT)	Cooperation in the NASA Pandora Project and Pandora Global Network (PGN)	Project-Specific Agreement (PSA)	NASA and Universidade de Sao Tome Principe (USTP) will establish one or more ground based air quality/atmospheric Sun spectrometer systems at mutually agreed site(s). The inclusion of these stations within the Pandora Global Network (PGN) will improve the understanding of the properties and concentrations of select trace gases, and their impact on both global and regional scales. Another objective of this cooperation is to encourage scientists from both NASA and USTP to develop research programs using data collected by USTP along with data available from the Pandora Project database located at NASA's Goddard Space Flight Center in Greenbelt, Maryland.	4-Mar-19	4-Mar-59
680	Johnson Space Center (JSC)	Hokkaido University (HokuDai)	Japan (JA)	International Genesis Sample Loan Agreement	Project-Specific Agreement (PSA)	Hisayoshi Yurimoto of Hokkaido University in Sapporo, Japan, proposes to use the Genesis samples to undertake scientific investigations (described in one or more sample requests submitted by the PI to the Genesis Sample Curator at JSC and approved by the Genesis Sample Curator).	12-Mar-19	12-Mar-24
681	George C. Marshall Space Flight Center (MSFC)	Brazilian Space Agency (AEB)	Brazil (BR)	Implementing Arrangement (IA) for Cooperation on the Scintillation Prediction Observations Research Task (SPORT)	Implementing Arrangement/Agreement (IA)	Collaborative CubeSat activity with Brazilian Space Agency (AEB) to study ionospheric phenomena. Will launch via CubeSat Launch Initiative.	18-Mar-19	31-Dec-25
682	Headquarters (HQ)	LEGO System A/S	Denmark (DA)	Annex 3 - to the Non-Reimbursable Space Act Umbrella Agreement with LEGO System A/S of Denmark	Project-Specific Agreement (PSA)	Annex 3: NASA will assist LEGO in their development of space themed LEGO sets for 2019. In this context, NASA and LEGO will engage in discussions re. space themes and stories that are the basis for LEGO's product development, manufacturing, marketing communications and campaigns. The project aims to inspire children around the world to get engaged with STEM and the prospect of space exploration through play and creative story telling while, to the greatest extent possible, remaining true to NASA technology and careers. NASA will provide LEGO City with access to assets and resources to assist LEGO in its product development, including the related product marketing, advertising and communications campaigns. LEGO wishes to further this partnership with NASA to bring to life even more of the stories, careers, technology and science behind the various endeavors surrounding missions into space and more specifically, the aspirations of the Mars Mission. It is the wish of both parties for NASA to provide LEGO with a great link to reality and Science Technology Engineering and Mathematics ("STEM") education by assisting LEGO in telling the stories of the men and women who make space travel possible.	25-Mar-19	31-Dec-20
683	Ames Research Center (ARC)	Center for Astrobiology (CAB)	Spain (SP)	Life-Detection Mars Analog Project (LMAP)	Project-Specific Agreement (PSA)	Life-Detection Mars Analog Project (LMAP) will demonstrate the feasibility of drilling missions on Mars in support of the search for life on the planet.	12-Apr-19	31-Mar-21

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
684	Johnson Space Center (JSC)	Institut Universitaire Europeen de la Mer	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Jean-Alix Barrat of the Institut Universitaire Europeen de la Mer in Plouzane Cedex, France, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	12-Apr-19	12-Apr-24
685	Johnson Space Center (JSC)	Universite Joseph Fourier a Grenoble	France (FR)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Eric Quirico of CNRS/Universite Joseph Fourier in Grenoble, France, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	12-Apr-19	12-Apr-24
686	Johnson Space Center (JSC)	University of Tokyo	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Takashi Mikouchi of the University of Tokyo in Tokyo, Japan, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	12-Apr-19	12-Apr-24
687	Johnson Space Center (JSC)	National Institute of Polar Research (NIPR)	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Naoya Imae of the National Institute of Polar Research in Tokyo, Japan, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	12-Apr-19	12-Apr-24
688	Johnson Space Center (JSC)	Lund University	Sweden (SW)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Carl Alwmark of Lund University in Lund, Sweden, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	12-Apr-19	12-Apr-24
689	Johnson Space Center (JSC)	University of Glascow	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Martin Lee of the University of Glasgow in Lilybank Gardens, Glasgow, United Kingdom, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	12-Apr-19	12-Apr-24
690	Johnson Space Center (JSC)	University of Bristol	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Tim Tomkinson of the University of Bristol in Clifton, Bristol, United Kingdom, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	12-Apr-19	12-Apr-24
691	Johnson Space Center (JSC)	University of Manchester	United Kingdom (UK)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Katherine Joy of the University of Manchester in Manchester, United Kingdom, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	12-Apr-19	12-Apr-24

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
692	Goddard Space Flight Center (GSFC)	Natural Resources Canada (NRCan)	Canada (CA)	Cooperation in Space Geodesy that Contribute to the Enhancement of the Global Geodetic Observing System (GGOS)	Project-Specific Agreement (PSA)	NASA/The Department of Natural Resources Canada (NRCan) will cooperate in scientific programs in Earth observation and the enhancement of the Global Geodetic Observing System (GGOS).	16-Apr-19	16-Apr-29
693	Ames Research Center (ARC)	German Aerospace Center (DLR)	Germany (GM)	Implementing Arrangement (IA) Between NASA and the German Aerospace Center (DLR) for Cooperation on the Development of Fundamental Aerodynamic Data and Validation Simulations in support of Predicting Entry and Breakup of Objects Traveling at Orbital or Sub-Orbital Speeds	Implementing Arrangement/Agreement (IA)	This is an Implementing Arrangement (IA) under the NASA-German Aerospace Center (DLR) Framework agreement. The IA is for cooperation on the development of fundamental aerodynamic data and validation simulations in support of predicting entry and breakup of objects traveling at orbital or sub-orbital speeds. This activity is funded out of the Planetary Defense Coordination Office in SMD.	18-Apr-19	19-Apr-20
694	George C. Marshall Space Flight Center (MSFC)		Italy (IT)	Reimbursable Space Act Agreement Between The National Aeronautics And Space Administration (NASA) And The Italian Space Agency (ASI) For The Dispenser And Integration Services For The ASI ArgoMoon CubeSat On NASA's Exploration Mission-1	Project-Specific Agreement (PSA)	NASA to provide cubesat dispenser and integration services to ASI on a reimbursable basis for the launch of their ArgoMoon CubeSat on NASA's EM-1 (as a secondary payload on SLS). A separate IA was signed for the flight of the CubeSat.	18-Apr-19	6-Feb-24
695	Headquarters (HQ)	United Nations Environment Programme (UNEP)	Kenya (KE)	Agreement between the National Aeronautics and Space Administration (NASA) of the United States of America and the United Nations Environment Programme (UNEP) for Collaboration in the Promotion and Execution of the Global Learning and Observations to Benefit the Environment (GLOBE) Program and UNEP Activities	Project-Specific Agreement (PSA)	The Global Learning and Observation to Benefit the Environment (GLOBE) Program is an international environmental science and education program, established by the United States Government on Earth Day on April 12, 1994, whose efforts led by the National Aeronautics and Space Administration to bring students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community. In parallel to NASA?s efforts through GLOBE, UNEP promotes environmental education, awareness, and training to inspire, inform and enable the nations and its citizens worldwide to improve their quality of life without compromising that of the future generations.	25-Apr-19	25-Apr-24
696	Jet Propulsion Laboratory (JPL)	King's College London	United Kingdom (UK)	Agreement Between King?s College London (KCL) and the National Aeronautics and Space Administration (NASA) of the United States of America Concerning Cooperation on Joint European Airborne Imaging Spectrometer Science Campaign	Project-Specific Agreement (PSA)	NASA/King?s College London will fly remote sensing campaigns at science, calibration, and validation sites throughout Europe with JPL airborne imaging spectrometers using KCL-provided Twin Otter aircraft.	29-Apr-19	29-Apr-24
697	Goddard Space Flight Center (GSFC)	National University of San Agustin (UNSA)	Peru (PE)	Extension 3: Space Geodesy: Satellite Laser Ranging (SLR)	Project-Specific Agreement (PSA)	Extension 3: NASA/Universidad Nacional de San Agustin (UNSA) will cooperate on the operation of a satellite laser tracking station at the National University of San Augustin (UNSA) Geophysical Institute at Characato in Arequipa, Peru. Extension 2: Cooperating Agency: Universidad Nacional de San Agustin (Peru) - to operate a satellite laser tracking station at the National University of San Augustin (UNSA) Geophysical Institute at Characato in Arequipa, Peru.	30-Apr-19	25-Oct-24

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
698	Goddard Space Flight Center (GSFC)	United Kingdom Space Agency (UKSA)	United Kingdom (UK)	Amendment 8: Swift Agreement: Ultra Violet and Optical Telescope (UVOT)	Project-Specific Agreement (PSA)	Amendment 8: NASA and the United Kingdom Space Agency (UKSA) will collaborate on the assembly of the Ultra Violet and Optical Telescope (UVOT) for the Swift Gamma Ray Burst Explorer mission. Swift is a Medium Explorer (MIDEX) mission. Swift launched in November 2004 to make a comprehensive study of approximately 1,000 gamma ray bursts to determine the origin of the bursts and to study their associated physical processes. The XRT instrument will report the x-ray afterglow position within 5 arcsec, measure the red shift and provide photometry over a wide dynamic range. A UVOT will generate an optical finding chart with subarcsecond resolution, measure red shifts and provide accurate photometry for eighth to twenty fourth magnitude sources. A Burst Alert Telescope (BAT) will observe and locate hundreds of bursts per year. All three instruments will be mounted on the Swift Optical Bench to form the Swift Observatory. Amendment 7: NASA and the United Kingdom Space Agency (UKSA) will collaborate on the assembly of the Ultra Violet and Optical Telescope (UVOT) for the Swift Gamma Ray Burst Explorer mission. Swift is a Medium Explorer (MIDEX) mission. Swift launched in November 2004 to make a comprehensive study of approximately 1,000 gamma ray bursts to determine the origin of the bursts and to study their associated physical processes. The XRT instrument will report the x-ray afterglow position within 5 arcsec, measure the red shift and provide photometry over a wide dyn	7-May-19	31-Mar-20
699	Johnson Space Center (JSC)	Curtin University of Technology	Australia (AS)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Philip Bland of Curtin Universitv in Perth, Western Australia, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10-May-19	10-May-24
700	Johnson Space Center (JSC)	Curtin University of Technology	Australia (AS)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Gretchen K. Benedix of Curtin University in Perth, Western Australia, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10-May-19	10-May-24
701	Johnson Space Center (JSC)	Westfalische Wilhelms-Universitate Munster	Germany (GM)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Andreas Stracke of Westfalische Wilhelms-University in Miinster, Germany, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10-May-19	10-May-24
702	Goddard Space Flight Center (GSFC)	Centre National De La Recherche Scientifique	France (FR)	Amendment 1: Visiting Researcher Agreement for Dr. Jean-Paul Boy	Visiting Researcher Agreement (VRA)	Amendment 1: NASA/Centre National de la Recherche Scientifique (CNRS) will host Dr. Jean-Paul Boy to conduct space geodetic research, including processing data from the GRACE and GRACE-FO missions, validate mass variation data, and derive independent de-aliasing products. Original Agreement: To host Dr. Jean-Paul Boy to conduct space geodetic research, including processing data from the GRACE and GRACE-FO missions, validate mass variation data, and derive independent de-aliasing products.	17-May-19	31-Jan-20

No.	NASA Installation	Partner Name	Country	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature) Date	Expiration Date
703	Goddard Space Flight Center (GSFC)	Japan Aerospace Exploration Agency (JAXA)	Japan (JA)	Extension to Amendment to Memorandum of Understanding (MOU) Between NASA and the Japan Aerospace Exploration Agency (JAXA) for Cooperation on the Global Precipitation Measurement (GPM) Program	Project-Specific Agreement (PSA)	Extension: The purpose of this Memorandum of Understanding (MOU) is to establish the terms and conditions under which NASA and JAXA will cooperate in the joint development, launch, operations and use of the Program for peaceful purposes. The Program consists of NASA and JAXA assets operating in partnership with other earth-observing satellites and instruments to produce global precipitation science data.	21-May-19	31-Dec-29
704	Goddard Space Flight Center (GSFC)	University of Leipzig (UL)	Germany (GM)	Visiting Researcher Agreement for Johannes Quaas	Visiting Researcher Agreement (VRA)	NASA/University of Leipzig (UL) will allow Dr. Johannes Quaas to visit Goddard Institute for Space Studies (GISS) to study deep convective clouds to advance accurate predictions in glaciation processes and ice detrainment.	27-May-19	11-Feb-20
705	Johnson Space Center (JSC)	Curtin University of Technology	Australia (AS)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Fred Jourdan of Curtin University in Bentley, Australia, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	29-May-19	29-May-24
706	Johnson Space Center (JSC)	Vrije University Brussels (VUB)	Belgium (BE)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Seann J. McKibbin of Vrije Universiteit in Brussels, Belgium, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	29-May-19	29-May-24
707	Johnson Space Center (JSC)	Physical Research Laboratory (PRL)	India (IN)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Dwijesh Ray of Physical Research Laboratory in Ahmedabad, India, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	29-May-19	29-May-24
708	Johnson Space Center (JSC)	Chiba Institute of Technology	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Tomoko Arai of Chiba Institute of Technology in Narashino, Chiba, Japan, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	29-May-19	29-May-24
709	Johnson Space Center (JSC)	National Institute of Polar Research (NIPR)	Japan (JA)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Akira Yamaguch of National Institute of Polar Research in Tokyo, Japan, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	29-May-19	29-May-24